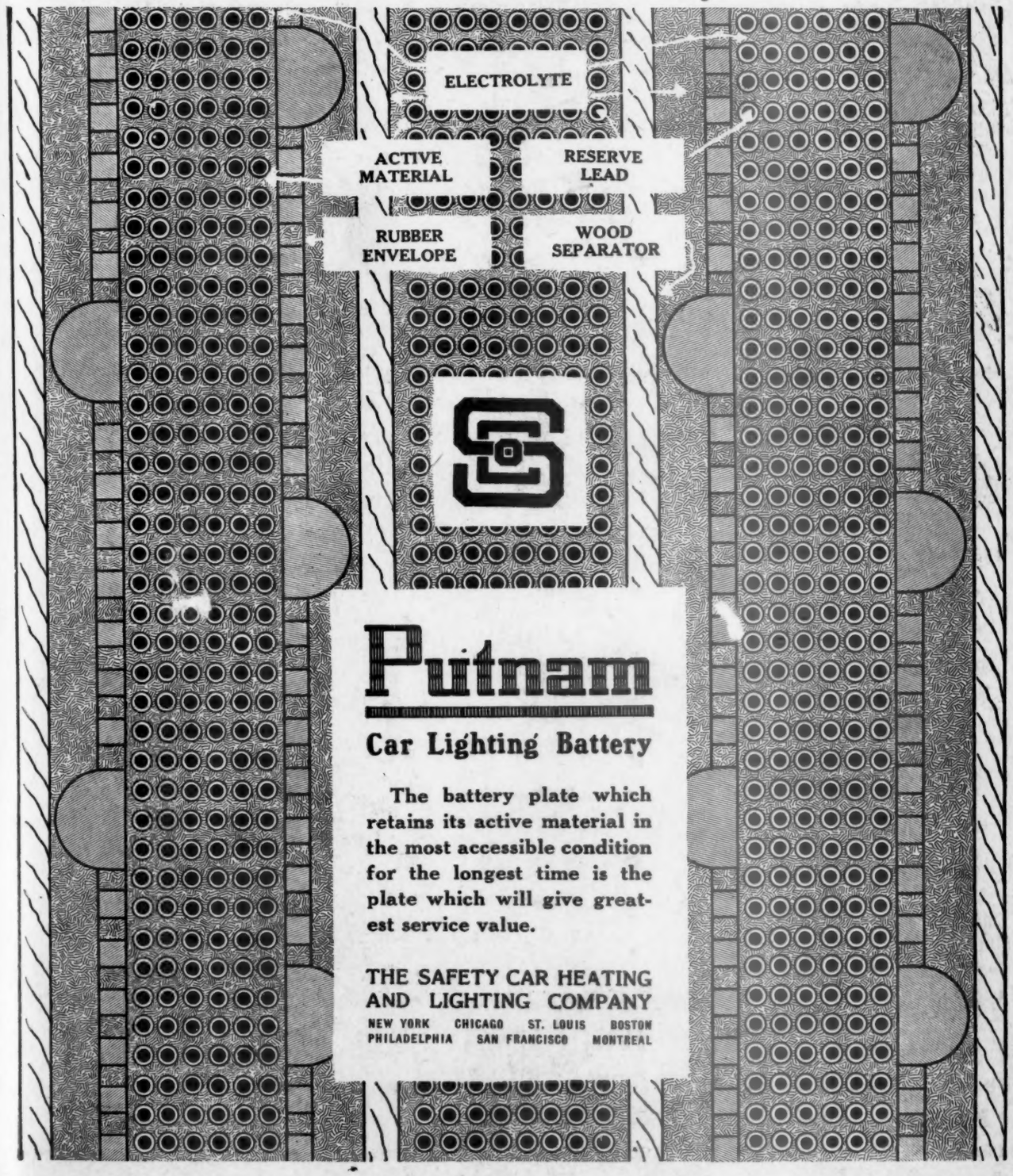
PERIODICAL ROOM
GENERAL LIBRARY
UNIV. OF MICH.

JUN 12 1923

# Railway Age

FIRST HALF OF 1923—No. 27 NEW YORK—JUNE 9, 1923—CHICAGO SIXTY-EIGHTH YEAR

Published Weekly by Simmons-Boardman Pub. Co., 30 Church St., New York, N. Y. Subscription Price U. S., Canada and Mexico, $6.00; foreign countries (excepting daily editions), $8.00, and $10.00 a year including all dailies; single copies, 25c. Entered as second-class matter January 30, 1918, at the post office at New York, N. Y., under the act of March 3, 1879.


ELECTROLYTE
ACTIVE MATERIAL
RESERVE LEAD
RUBBER ENVELOPE
WOOD SEPARATOR
Putnam
Car Lighting Battery
The battery plate which retains its active material in the most accessible condition for the longest time is the plate which will give greatest service value.
THE SAFETY CAR HEATING AND LIGHTING COMPANY
NEW YORK CHICAGO ST. LOUIS BOSTON
PHILADELPHIA SAN FRANCISCO MONTREAL

Alphabetical Index to Advertisements, Page 74 Classified Directory of Advertisers, Page 70

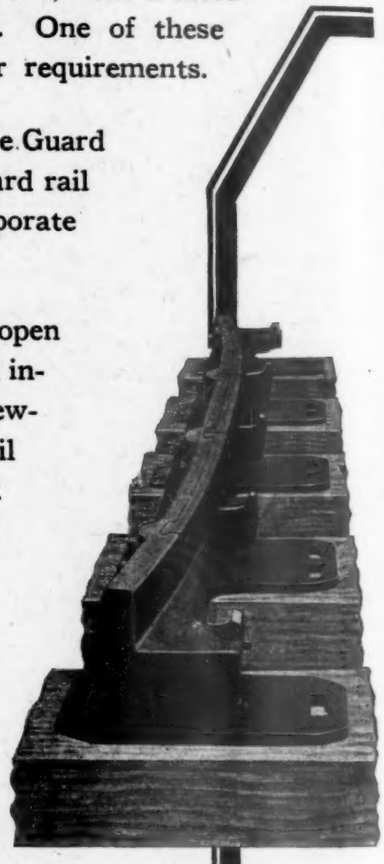
# "ACCO" ONE PIECE Guard Rail

OVERCOMES the pronounced disadvantages in the present type of guard rails. It is a one piece casting of open hearth steel, heat treated and furnished in three types. One of these types is certain to meet your requirements.

All types of "ACCO" One Piece Guard Rails eliminate rails, bolts, guard rail clamps and braces, and incorporate tie plates and foot guards.

Types "B" and "C," by use of open hearth steel or manganese steel inserts, provide a means for renewing that portion of the guard rail subjected to greatest wear. These inserts are easily removed and replaced without disturbing the guard rail. Inserts carried in stock.

Two Views of Type "A"



Two Views of Types "B" and "C," showing inserts made of manganese or open-hearth steel.

*Other Reading Specialties*

Rail Benders, Replacers, Guard Rail Clamps, Compromise Joints

**American Chain Company,**
INCORPORATED
Reading Specialties Division
General Sales Offices. BRIDGEPORT, CONN.

District Sales Offices: BOSTON CHICAGO NEW YORK PHILADELPHIA PITTSBURGH SAN FRANCISCO

# EDITORIAL

Railway Age

The Table of Contents Will Be Found on Page 5 of the Advertising Section

**Freight Claims and Operating Improvements**

Eighteen cents of every dollar paid out in freight claims in 1922 went for the payment of loss and damage to shipments of fresh fruits and vegetables. The most important contributory cause for claims in the handling of these commodities was delay. The next most important cause was rough handling of cars. In the movement of all commodities rough handling was responsible for 17 cents out of every dollar paid out in claims. Clearly there is room for great improvement in the more expeditious handling of fruit and vegetable shipments and for more gentle treatment of all cars. Most rough handling can be charged to the yards. Consequently, from a standpoint of loss and damage claims, the fewer times a car has to be switched in its journey the better. Moreover, the fewer times a car has to be handled in yards the more likely it is to arrive promptly at its destination, thus saving claims for damage due to delays in transit. The operation of main trackers wherever possible, keeping cars out of intermediate yards, would cut down claims both for delay and rough handling. The peg system would help in bringing about more rapid movement. Aside from reducing the causes for claims, these two improvements in freight train operation make for greater economy in the handling of freight. They increase the capacity of the railroad. With the prospect of continued heavy traffic, the consideration of improved operating methods is well worth while; that such improvements would tend to reduce loss and damage to freight makes a study of them the more advisable.

**Our Mutual Problems**

It is said that one cannot hate a person that he knows. This is one way of emphasizing the value of personal contact and acquaintanceship. No single factor has done more to widen the breach between the railways and the public they serve than the failure of their officers to realize the necessity for the maintenance of this contact as their systems have grown and the demands on their time have increased. A marked exception to this tendency was the practice pursued by the late E. P. Ripley, whose policy of utilizing every opportunity to mingle with the shippers along his line did much to strengthen the Santa Fe's position in the territory it served. Recently many railroads have given more attention to this subject and their activities have been described in these columns from time to time. A recent development was the observance of "Union Pacific Day" at North Platte, Neb., on May 31, described on another page in this issue, when President Gray, the members of his official staff and many employees of the road, joined with business men and farmers of Nebraska, Colorado and Wyoming in a field day celebration. In this informal way an opportunity was afforded the officers and employees of the road to mingle with the business men and farmers and to discuss their mutual problems with them. As President Gray pointed out, the farmers, the business men and the railway are mutually dependent and none can succeed without the others. A realization of this fact by the patrons and the employees of a railway will do much to close the breach which has developed and will eliminate much of the agitation and legislation which has as its purpose the harassing and restricting of the roads.

**Are Old Machines Better Than None?**

It would not be difficult to imagine instances in which the possession of old, unreliable machines was an actual disadvantage as compared to having no machines at all. In the case of machine tools used in railroad repair shops and enginehouses, old machinery is everywhere in evidence, being usually better than none but still a great handicap to efficient operation. Cases could be cited where it would cost the railroads less if certain machine operations were omitted, or done by hand, rather than on the antiquated, inefficient machines now used. One illustration may serve to make this point clear. A repair shop mechanic was recently observed truing worn crank pins without removal from the driving wheels by means of a special attachment on an old quartering machine which should have been scrapped years ago. In view of the obvious lack of rigidity and the spring of the cutting tool, the mechanic was asked regarding the accuracy of the work and admitted that it was impossible to turn the crank pin straight and with a taper less than 1/32 in. on a side, or 1/16 in. on the diameter. The rod bushing for such a pin must be bored slightly larger than the largest diameter of the pin, there being excessive play at other points on the pin resulting in rapid bushing wear and rod pounding. The chances are that the pin was more accurate before than after machining and in any case the pin condition could have been improved by hand filing without going to the useless trouble and expense of setting up the driving wheels in a quartering machine which could not produce satisfactory work. It is unfortunately true that some antiquated railroad machine tools hinder more than they help in getting output.

**Studying Car Loading Figures**

The car loading figures reported each week by the Car Service Division of the A. R. A. supply, as was brought out in an editorial in last week's issue of the *Railway Age,* one of the best indices which we have of current railway activity and deserve special consideration as one of the many indices by which observers can watch the trend of the country's business and industrial activity generally. Of course, as persons interested in railway matters particularly, those who read this will be ready enough to bear in mind that the car loadings figures are of primary importance to those who follow the railway situation. The figures attain such importance because they are the first available as to what results the railways are securing. In other words, they anticipate the monthly earnings statements and the compilations of operating statistics. For that reason they assist in making something of a forecast of what the earnings statements and

operating statistics are going to show when they become available two or three weeks or a month later. Of course, a forecast of this sort has certain limitations, but so has any forecast. The limitations are balanced in this case by the timely character of the car loading reports and by the latter's admitted all-inclusiveness. The car loadings figure is one of the most valuable railroad statistics which is compiled at the present time. There seems to be an increasing realization of the value of the figures and a gradually extending use of them. The situation is such that it merits study. Such study might be expected to follow along two separate lines. One would be a consideration of whether the figures as at present compiled and published supply the best information that they might be made to supply. The other would possibly be along the lines of an analysis of just what the car loadings figures do or do not show; it would be valuable, for example, if there could be worked out the proper relationship between the trend of weekly car loadings and that of the monthly revenue ton-miles or net ton-miles. It is not impossible that some investigation of this kind has already been carried on. Whether it has or not, it is interesting to see how the car loadings figures, originated for entirely different purposes, have been given uses far beyond those originally intended. It speaks well for the value of the car loading figure as a statistical unit.

### The Use of Simple Indices

There was a time not so many years ago when students of railway affairs were inclined to pay what it has since become the tendency to consider undue attention to such units in railway operations as a railroad's operating ratio, its revenue train load or its revenue car load. The fault that more recently has been found with this practice resulted from the too frequent instances in which the figures were used to compare the efficiency of operation of different properties, the operating characteristics of which were too unlike to allow such a comparison to be entirely justifiable or fair. The discussion of the use of these units is of long standing. It is now considered that such figures used with proper discretion and with proper cognizance of the underlying conditions do have a value as indices of a management's efficiency and a rather greater value comparatively as guides to a study of the road's particular advantages or problems. A point which is often overlooked is the reason for the extensive use of the units mentioned. It resulted from the fact that they were simple indices, easy to pick out in the railway's reports and ready for immediate use without extensive use of the slide rule or calculating machine to secure them. In referring in the foregoing to the student of railway affairs, we have had in mind rather more than anybody else, the person, whoever he may be—public service commissioner, bondholder, stockholder, financial house statistician—who studies railway operations from the outside. This use of simple indices is a factor, however, which is brought home to practically every railway operating man who has to use statistics in the ordinary conduct of his work. In spite of the vast quantity of statistical data which is supplied to a superintendent or general superintendent the tendency is to pick out of his periodical reports four or six figures which he watches more closely than the rest and which he habitually uses as his guides. The statistics covering railway operation which are issued today are much more voluminous than they used to be. The question always arises as to whether we have yet got in the habit of making proper use of all that is set before us. The tendency is still to stick to the use of the simple indices. Whether the tendency be a good or a bad one, it exists and it is a most important factor which must never be forgotten in any discussion of the compilation and use of statistics.

# The "Actual Investment" in the Railways

THE RADICALS who held a conference on railroad valuation in Chicago recently expressed solicitude for the protection of "actual investment prudently made in railroad properties." At the same time, speakers at their conference and persons who gave out press statements for it constantly made use of a figure of 13 billion dollars as indicating their opinion of the investment which actually has been made in railroad properties, and the valuation which should be placed upon them.

It is not, and never will be, possible to ascertain the investment which actually has been made in all the railroads, but it is easy to marshal facts and statistics which will convince any fair and rational man that those who used this figure of 13 billion dollars as indicating the total investment are mentally dishonest, and are bent upon confiscation of investment which actually has been made. Whether this investment has been "prudently" made still remains to be determined. The success of the efforts to confiscate a large part of it would prove that it has not been prudently made.

Prior to 1907 there was no uniform system of keeping railroad accounts in this country. Since that year the accounts of all the railroads have been kept as prescribed by the Interstate Commerce Commission, and under its supervision and inspection. Therefore, statistics of the commission regarding the amount of investment that has been made since 1907 must be accepted by every fair and intelligent man as showing as closely as is possible the investment which actually has been made since then.

Now, on June 30, 1907, when the Interstate Commerce Commission's accounting system was put into effect, the books of the railways showed a total investment in their properties of slightly more than 13 billion dollars—the same amount as the radicals indicate has been invested up to the present time. On December 31, 1921, their books showed a total investment (including, as in 1907, that in switching and terminal companies) exceeding 21 billion dollars. Therefore, between June 30, 1907, and the end of 1921, a period of fourteen and one-half years, the investment actually made in the railroads and entered upon their books in the manner required by the Interstate Commerce Commission exceeded 8 billion dollars.

Eight billion dollars being positively known to have been invested since June 30, 1907, it necessarily follows, if the total investment which has been made is less than 13 billion dollars, that the total investment made prior to June 30, 1907, was only 5 billion dollars. The railways of the United States in 1907 had been in process of construction and development for over 80 years. The necessary implication of the use by the radicals of the figure of 13 billions is that only two-thirds as much investment was made in the railways in the first 80 years of their existence as was made in the next 15 years. In 1907 the railways had 230,000 miles of line, and 328,000 miles of track. They had then 91 per cent as many miles of line, 81 per cent as many miles of track, 81 per cent as many locomotives, 84 per cent as many freight cars and 77 per cent as many passenger cars as they had in 1921. If the investment in them at that time was only 5 billion dollars, then it amounted to less than $22,000 per mile of line, and to only $15,200 per mile of track.

If the railways of this country up to 1907 had been constructed and developed, with all their equipment, multiple tracks, shops, terminals and stations, at a total cost of less than $22,000 per mile of line, then they certainly were constructed and developed with the most miraculous efficiency and economy ever displayed in the history of the world. In the year 1907 the government-owned railways of certain countries reported costs of construction of the following amounts per mile of line: Germany, $109,000; Austria,

$113,000; Hungary, $63,000; Italy, $124,000; Denmark, $50,000; Belgium, $157,000; Switzerland, $111,000; Japan, $48,000; New South Wales (Australia), $63,000. Nowhere on earth did there exist in 1907 a railway system which had cost less than twice as much as the radicals claim the railways of this country had cost at that time.

If anything were needed to convict the radicals of trying deliberately to mislead public opinion for the purpose of promoting a campaign of railroad destruction and confiscation, their use of 13 billion dollars as a figure representing the actual investment that has been made in the railways up to the present time ought to be sufficient.

# An Important Valuation Decision

THE RECENT DECISION of the Supreme Court of the United States in the Southwestern Bell Telephone Company valuation case has a very important bearing upon the controversy now going on over the valuation of the railroads. The principles and methods applicable in the valuation of a telephone company's plant and business are, of course, applicable in the valuation of the railroads' plants and business.

The so-called "progressive group" are attacking the principles being applied and the methods being used by the Interstate Commerce Commission in making valuations of the railroads upon the ground that the commission is giving consideration to the probable cost of reproduction of the railways, whereas, according to the radicals, it should give paramount, and even almost exclusive, consideration to the actual cost of construction. The decision of the Supreme Court in this telephone case shows that from a legal standpoint the Interstate Commerce Commission has erred in exactly the opposite way from what the radicals claim. It has not given enough consideration to the probable cost of reproducing the railways, and, therefore, almost all its valuation figures are too low instead of too high.

The decision of the Supreme Court referred to is that in the case of the State of Missouri ex rel. Southwestern Bell Telephone Company vs. Public Service Commission of Missouri. The record in this case showed that, as Justice McReynolds said in rendering the opinion, "Obviously, the commission undertook to value the property without according any weight to the greatly enhanced costs of material, labor, supplies, etc., over those prevailing in 1913, 1914 and 1916." Competent witnesses estimated this enhancement of costs as 45 to 50 per cent. The court, after quoting from previous decisions rendered by it in numerous cases involving the rates of railroads and public utilities, said: "It is impossible to ascertain what will amount to a fair return upon properties devoted to public service without giving consideration to the cost of labor, supplies, etc., at the time the investigation is made. An honest and intelligent forecast of probable future values made upon a view of all relevant circumstances is essential. If the highly important element of present costs is wholly disregarded such a forecast becomes impossible." Because of the failure of the Missouri Commission to take into consideration up-to-date costs of labor, supplies, etc., its decision and that of the Supreme Court of Missouri sustaining it were set aside.

In making its valuations of the railways the Interstate Commerce Commission has been doing substantially the same thing the Missouri commission did. It has been making its valuations of individual railways as of certain dates, most of them in 1914 and 1915, and applying, in making them, the unit costs of labor, materials and supplies in those years. Its plan of bringing the valuations up to date has been to add to the valuations thus arrived at the actual investment made in the properties since the dates of the valuation. It seems plain, in view of the decision of the Supreme Court in the Southwestern Bell Telephone Company case, that this method will not be sustained by the courts. The decision apparently establishes beyond question that, in regulating rates in the year 1923, for example, upon the basis of valuation, the commission must give consideration to what it would cost to reproduce the railways at the wages of labor and the prices of materials and supplies prevailing in 1923. It is hardly necessary to add that if the valuations of the railways were based upon the estimated cost of reproducing them at the wages and prices that prevail now, the aggregate valuation, instead of being reduced by several billion dollars, as the radicals advocate, would be increased by several billions.

It would, however, be a misinterpretation of the Court's opinion to say it held that the valuation of a public utility or railroad must be based entirely on up-to-date costs of construction. It condemned the Missouri Commission for undertaking to evaluate the property *"without acording any weight"* to the greatly enhanced costs. What it held is that "if the highly important element of present costs is *wholly disregarded"* no true valuation is made. All other elements that enter into the value of railroad or public utility property, as well as its probable cost of reproduction, must be considered. There can be no doubt, however, in the light of this decision, that the Interstate Commerce Commission must revise and increase its valuations of the railroads in order to give due weight to present day costs.

Justice Brandeis wrote a dissenting opinion in the telephone case, in which Justice Holmes concurred, attacking the use of estimates of cost of reproduction in making valuations. He contended that the proper basis for the regulation of the rates of railroads and public utilities is the actual investment which has been made in them. Estimates of the cost of reproduction, he argued, must fluctuate. On this basis, when wages and prices increase valuations and the net return allowed upon them must be advanced; when wages and prices decline, valuations and the net return allowed to be earned upon them must be reduced. He disregarded the fact that as a practical matter it is extremely difficult and often impossible to ascertain what investment actually has been made in a railroad or public utility. If valuations had to be based entirely upon actual investment no valuations of some railroads ever could be made, simply because the total investment which has been made in them never could be ascertained.

Justice Brandeis' dissenting opinion merits careful study, however, by all those who will share in determining the policy the railways shall adopt with respect to valuation. There are questions of economics and statesmanship, as well as questions of law, which demand consideration. Would it be the part of statesmanship for the railways to try to get valuations based mainly upon present day costs? If they succeeded in doing so, would it be the part of statesmanship to try to get rates high enough to pay a "fair return" upon valuations thus made? As Justice Brandeis points out, while costs of constructing and developing railways sometimes increase, they also sometimes decrease. They have enormously increased within the last ten years. But the history of the periods which have followed other great wars indicates that the period following the World War will be one in which the general tendency of prices and wages will be downward. What would be the effect in the long run upon public sentiment and the welfare of the owners of railroad securities if the railroads now insisted upon valuations, rates and net return based upon present day costs, and subsequently had to reduce all of them because wages of labor and prices of materials had declined?

Whatever may be the answer to these questions, one thing seems reasonably certain. If radicals should succeed in influencing the Interstate Commerce Commission to make valuations of the railways which plainly were unfairly low, or in securing the passage by Congress of legislation for that purpose, the railroads could appeal with confidence to the federal courts for protection.

# The Regional Advisory Boards

ONE OF THE BEST POLICIES ever adopted by the railways for increasing the freight business handled and fostering a better understanding and better relations between them and the public, is that of organizing "regional advisory boards" composed of representatives of the shipping public and regulating bodies in various parts of the country to co-operate with the Car Service Division of the American Railway Association in studying traffic needs and improving the distribution and use of freight cars. Five of these regional advisory boards have been organized and others are to be created. We publish elsewhere in this issue an article telling of their personnel, functions and purposes.

The most immediately pressing need of the railways is to secure the most efficient possible utilization of all their existing facilities in the handling of freight. In order to do this it is essential that they bring about the fairest possible distribution of cars between different industries and territories, the maximum practical loading of cars, the greatest possible reduction of empty car mileage, and the greatest possible increase of the average miles traveled by each car daily.

None of these things can be accomplished without the active co-operation of all classes of shippers. Only from shippers can the information regarding traffic needs be obtained upon which can be based the fairest and most efficient distribution of cars. Only through the co-operation of shippers can the heaviest practicable loading be secured. Only if shippers will load and unload cars as promptly as possible and delay them for reconsignment as little as possible can the maximum practicable daily mileage per car be obtained.

These regional advisory boards, which are composed of prominent representatives of almost every branch of production and commerce in their respective territories, seem admirably qualified to furnish the railways with full information regarding traffic needs. They can also—and this is one of their important functions—serve a most useful purpose in stimulating the classes of shippers they represent to co-operate cordially with the operating departments of the railways in carrying out all measures to secure the most efficient use of cars.

In addition to helping promote the most efficient use of existing transportation facilities, these regional advisory boards are well adapted to bringing about a better understanding of the railroad situation on the part of many shippers. The country is confronted with a serious shortage of means of transportation. The officers and traffic managers of large industrial concerns know this. There are, however, throughout the country, and especially in the rural districts, literally millions of shippers, especially farmers, who do not realize that there is a real shortage of transportation. They are, therefore, disposed when they cannot get cars promptly to condemn the railways for inefficient management. One of the best features of these regional advisory boards is that they all include prominent representatives of the farmers' organizations. These representatives of the farmers' organizations cannot serve on the boards without being brought to a keen realization of the fact that the true reason why the railways cannot furnish the farmers and other shippers all the cars they want, especially in the crop moving season, is not that the railways are inefficiently operated, but that there actually is a serious shortage of means of transportation. Through the members of the boards the actual facts about the transportation situation are sure to be widely disseminated among various classes of producers and shippers. The regional advisory boards are bound, therefore, to prevent much unjust criticism of the railways.

Furthermore, when the fact that there is an actual and serious shortage of means of transportation is brought home to the members of these boards and the interests they represent, they can hardly fail to give thought to the reasons why this shortage of transportation has developed and to the means which must be adopted to remedy it. When men who have no political axe to grind begin to investigate and think upon these things, it is easy to anticipate the conclusions to which they will finally come. The work of these regional advisory boards will tend to make friends of the railways of all the men who participate in or are influenced by their work.

What we have said regarding the results that will be attained through the creation of these boards is predicated not only upon the assumption that their members will co-operate cordially with the railways, but also upon the assumption that the railways will in every available way reciprocate this co-operation. One point which needs to be strongly emphasized is that the boards include men who in their own fields are just as important as the higher officers of the railways are in their field. Now, these men of importance in other fields cannot reasonably be expected long to devote their time, thought and energies to means of helping improve the transportation situation unless the higher officers of the railways shall show sufficient interest in the work of the advisory boards to attend their meetings regularly, listen attentively to what their members have to say, and spare no effort either to carry out every suggestion made by the advisory boards or to show their members why it is not practicable or desirable to carry out the suggestions made.

One of the principal reasons for all the troubles the railways have had for years with the public has been that their higher officers have not come in contact enough with representatives of certain business interests, and especially of the farmers, to really know the transportation problems and points of view of these interests. Railway officers in the ordinary course of business have frequent conferences with traffic managers and other officers of big steel companies, lumber companies and other large concerns, and in consequence the railways get along quite well with these big concerns, but there are some classes, especially the farmers, whose aggregate shipments are very large and whose influence on government regulation is very great, of whom this is not true. The regional advisory boards constitute an excellent medium for bringing the higher officers of the railways into business contact with large interests with which the railways imperatively need a better understanding. There should be no failure to take full advantage of the opportunity presented.

# Better Engine Terminals Needed

THE RAILROADS are being criticized because they are not making better use of their locomotives. The best utilization of the locomotives is not being secured in many instances because of the need for adequate up-to-date engine terminal facilities. One railroad built an engine terminal 15 or more years ago which at that time was supposed to be the last word in engine terminal layout and construction. It served its purpose well at that time, but since then not only has the size of the power been greatly increased, but the terminal is called upon to handle many more locomotives a day than it was originally designed for. Notwithstanding this, no appropriations have been made in all this time for additional facilities or for improvements which should have been made to provide for the more powerful locomotives which have been introduced in recent years.

A locomotive designer of wide reputation recently exclaimed, "What's the use of designing larger and better locomotives when the railroads won't expend the money to provide the necessary facilities to get the best service from them?" When many of the engine terminals which are now in service were first built, locomotive parts were much lighter than they now are and could be handled fairly well without

special crane facilities. Now such facilities are absolutely necessary if efficient work is to be done, and yet how few enginehouses are equipped with them! The same thing applies to most of the other facilities in the terminals.

It may be argued that it is comparatively easy to finance the building of new cars and locomotives through equipment trust certificates, but that under conditions which have existed during the past few years, little if any money could be secured for making permanent property investments, such as would be necessary in enlarging, rebuilding or re-equipping a terminal. This may be true, but what is the use of building better and larger locomotives if they cannot be fully utilized? It is claimed that in many cases the better utilization of the locomotives made possible through the improved facilities will not only pay the interest on the investment, but will pay for the entire installation in a reasonable number of years. Surely there is some way of facing squarely up to this problem and of successfully meeting the situation—one suggestion for financing the new improvements was made in last week's issue of the *Railway Age*.

## Starting and Stopping Trains

PROBABLY THE WORST feature of the operation of fast through passenger trains in this country is the way they are often stopped and started. It is not uncommon for the brakes to be applied on such trains for station stops in a way that almost throws the passengers out of their seats. It is quite a common thing for them to be started and the slack in them taken up with positive violence. When trains are stopped and started in this way in the night many passengers are awakened. Whenever they are so stopped or started the impression made upon the passengers is very bad.

It is often said that these bad stops and starts are due almost entirely to the way the locomotive engineer does his work. They are almost always due either to the condition of equipment or to the performance of the locomotive engineer. But both the maintenance of the equipment and the work of the engineer are under the supervision of the officers of the railways. Therefore, it is their duty to check up the manner in which this very important part of the handling of trains is performed and apply the proper remedies when it is found to be badly performed.

It is idle to say that because of the weight of equipment and length of trains frequent bad stops and starts cannot be avoided. We have recently made five trips of approximately one thousand miles each in length on the "crack" trains of four different railways in different parts of the country. During three of these trips on two different roads the trains never were once stopped or started in an unsatisfactory way. On the two other trips there were frequent violent stops and starts. One of these occurred at 6 o'clock in the morning (daylight saving time). It awakened a large number of the passengers and in consequence the dining car served a large number of disgruntled persons unusually early.

A railroad may have a perfect roadbed, its train may consist of the finest equipment and may make high speed, the conductor, dining car steward and porters may be the perfection of politeness, and the food served may be good, but if the man in charge of the head end of the train handles it in such a way as to cause passengers discomfort and irritation the effect intended to be produced by making the service good in other respects will not be produced.

A thing that is needed on most of the railways, and especially on most of those that run heavy passenger trains at high speed, is an energetic and persistent campaign to improve the way that such trains are stopped and started. Whatever the reasons for bad stops and starts, the railway managements ought to set out resolutely to abolish them.

## Letters to the Editor

[*The* RAILWAY AGE *welcomes letters from its readers and especially those containing constructive suggestions for improvements in the railway field. Short letters—about* 250 *words—are particularly appreciated. The editors do not hold themselves responsible for facts or opinions expressed.*]

### A Suggestion for the Railway Clubs

SAN FRANCISCO, Cal.

TO THE EDITOR:

It is noticeable that certain of the railway clubs are devoting meetings that could well be given over to the presentation and discussion of distinctly railroad topics to matters that it takes a stretch of the imagination to consider as rail transportation subjects. While the number of offenders among the railway clubs has been few, it seems nevertheless a pertinent question whether there is not some means of coordinating the railway clubs' efforts in the selection of topics and the securing of speakers to present them. Is it not possible that if all the railway clubs would devote their meetings in a given month to "Thirty miles a day—thirty tons a car," they would render a service not only to the rail carriers but also to the nation?

It is the belief of the writer that the American Railway Association can well afford to assign to one of its assistant secretaries or perhaps to a committee the paternal direction of railway club activities.

WILLIAM S. WOLLNER,
Secretary, Pacific Railway Club.

### Regulating the Railroads Some More

NEW YORK CITY.

MY DEAR MR. EDITOR:

Has Hon. Couzens a monopoly of the *Age's* space?

Can't I bust into print, too?

My ideas on "Regulating the Railroads Some More" are more progressive than his'n. They are contained in the following open letter which I am sending to Senator James Couzens. CHARLES FREDERICK CARTER.

"Hon. James Couzens,

"U. S. Senator from Michigan,

"Washington, D. C.

"Comrade: As a fellow worker in the vineyard with W. Z. Foster, La Follette, Brookhart, Capper and yourself, I hasten to lay at your feet a tribute of appreciation for the way you are lambasting the railroads.

"Our hearts beat as one in this proposition laid down in your last open letter to that Kruttschnitt person.

"We are going to have a reduction in transportation charges and it is up to the railroads and the Interstate Commerce Commission to provide it; otherwise Congress will have to see to it that transportation charges are reduced.

"This dovetails beautifully into your epigram about the railroads' 'Narrow and misguided program of maintaining high freight rates and thus requiring the public to pay for the physical rehabilitation of the railways.'

"To make sure that the public doesn't have to pay for anything we ought to have a section in our Act to Regulate the Railroads Some More, to be jammed through Congress

next winter, levying a forced assessment on stockholders to pay for the 'rehabilitation.' We ought to make it 100 per cent on the $7,300,000,000 of stock outstanding. Let's make it a felony to refuse to pay such assessments, confiscate the stock and keep the stockholders in jail till they come across.

"Also, let's have a section decreeing compulsory investment in railroad securities. You see us fellows have been putting the screws on the railroads so hard for so long nobody will buy railroad stocks any more. Most of the roads are mortgaged up to the hilt, so THAT source of supply is nearly choked off. Let's make it a felony to refuse to buy at par such railroad securities as Congress, in its wisdom, shall decree.

"But these are only half way measures. Investors have no rights that Congress is bound to respect. In fact, all railroad regulation is based on that hypothesis. I am getting tired of amputating the railroad dog's tail an inch at a time. Let's apply the axe just back of the ears. In our Act to Regulate the Railroads Some More, let's decree that railroads shall have unlimited expenses to be fixed by Congress, but no revenues at all. That would cinch the farmer vote and the labor vote forever more.

"You are certainly correct in saying that 'The more constantly locomotives are in service the greater the earnings and the less need there is of additional locomotives.' It is nothing less than criminal the way even the best managed railroads take their locomotives out of service at every division terminal and dodder around with them, turning them around to head them back from whence they came, and cleaning the fires, and giving them water and coal and sand and the Lord knows what else, and repairing them and washing out the boilers and everything. It's got to stop. We'll put a section in our Act to Regulate the Railroads Some More, ordering that all locomotives shall be operated 24 hours a day 365 days a year, with severe penalties for stopping at stations or water tanks or coal docks.

"But, comrade, was it wise of you to roast railroad management for lack of 'operating efficiency?' We may need their votes. The railroad operating fellows who are trying in their poor, weak way to operate the railroads have grown up from boyhood in railroad service so that they have had no opportunity to learn railroading except by doing it. The number of Congressmen being strictly limited by law, only a few of us can achieve instant omniscience by the simple expedient of being elected to Congress. Therefore,

"Speak gently to the erring!
O, do not thou forget,
If we but feed them taffy,
We'll get their ballots yet!

"A bas les chemins de fer!

"Which, being interpreted, signifies 'Dam the railroads, any way.'

"Yours for the dictatorship of the proletariat!

"CHARLES FREDERICK CARTER."

# Engineers and the Railroads

ST. LOUIS, MO.

TO THE EDITOR:

This season's output of pseudo railroad experts promises to be unusually luxuriant and obnoxious. Amateur statesmen from all sections of the country are grabbing statistics by handfuls and rushing into print with their weird interpretations thereof. Their conclusions uniformly point to the breakdown and inefficiency of the railroads with never a word of praise, hope or encouragement for this country's proudest achievement, her railroad transportation system.

Much is still being said of the railroads' failure to function, although during the past year and especially within the last six months they have successfully handled more tonnage than ever before in their history. Considering the withering effect of governmental control and operation, the disastrous results of which are only now beginning to disappear, this feat is truly remarkable, yet scarcely a word commending it is seen in public print.

Few if any of the most violent critics of railroad management have had the opportunity of partaking of the responsibility of railroad management or appear to be in the slightest degree acquainted with the exacting duties of the modern executive of this, the most intricate business of all. Yet they do not hesitate to pit their meagre knowledge against the combined wisdom of those men who have brought the science of transportation to its highest known state of development.

In railroad work, outstanding preferment is attained only through merit. The pinnacle of success may only be reached after from 20 to 30 years continuously spent in overcoming difficulties and solving problems, each more severe than the one preceding. The railroad president is not tendered his position as a reward of merit for deeds accomplished, but to further make use of his acquired skill, experience and resourcefulness in the performance of new miracles for his company. Every hour of his official time is tabulated and arranged for days and sometimes weeks in advance. One of our best known executives is said to even keep a pencil and tablet at his bedside in order to utilize the workings of his subconscious mind, the manifestations of which sometimes occur to us in the form of inspirational thoughts during the small hours of the night. It is no wonder that the railroad man, in addition to his other duties, cannot devote more time toward broadcasting first hand and reliable information concerning the true status of the railroads and enlighten the public as to the tremendous amount of detail in their operation.

As it is, the people, at least those who listen at all, are compelled to lend their ear alike to the absurd outpourings of the politician who is merely ignorant and to others malevolently inclined, whose sense of justice has been obliterated by self-interest or perverted by alien teachings.

The railroads and those having our real welfare at heart now feel a growing confidence in the Transportation Act. Most of its provisions are obviously constructive and as it stands it merits the solid support of the American people. Unfortunately, too little is known about it. Adequate machinery, which needs only intelligent use to insure smooth working, has been built up for adjusting rates where they are proven inequitable and for settling disputes that will arise between management and men. There are laws enough, in fact many more than is good, yet a vastly greater amount is in preparation for the consideration of the next Congress; during the last Congress almost 600 bills affecting railroads, nearly all restrictive measures, did not reach consideration on account of adjournment.

Nearly all engineers of every branch, at some time in their life, have had more or less to do with the railroads. In fact the American railroad is a veritable monument to engineering science. They, better than men of other professions, understand the needs of our transportation system and are therefore now in a position to render an invaluable public service by interposing their collective strength between the railroads and those who would destroy their usefulness.

It would seem to be especially the duty of our national and local engineering societies to unite in the consideration of railroad legislation and not hesitate to expose that which is plainly harmful and destructive. Their best efforts might well be extended in combating with truth the systematic compaign of prejudice and misinformation fostered by malcontents and professional disturbers.

Within a few years it is to be sincerely hoped that interest in transportation matters will become universal and so much better directed that our railroads will again attain that prestige and whole-hearted support so necessary to their success. The engineer can well afford to devote some of his talents to a consummation of this result. W. D. HUDSON.

Fig. 1—*Absolute Head-Block Signal*

Fig. 2—*Absolute Dwarf Signal*

Fig. 3—*Intermediate Permissive Signal*

# C. & O. Installs New Signaling with Train Control

## Single Track Equipment Eliminates Unnecessary Stops and Expedites Movement at the Sidings

THREE-INDICATION color-light automatic block signals operated by alternating current, together with the ramps and control equipment for automatic train control, have been installed on 40 miles of single track between Charlottesville, Va., and Staunton, on the Chesapeake & Ohio. This installation is a continuation of the section from Gordonsville to Charlottesville, which was installed in 1919, and it is the intention to continue the installation from Staunton west to Clifton Forge in the near future. Twenty-four locomotives have also been equipped with automatic train control apparatus recently, which makes a total of 64 locomotives equipped with the device. The engine apparatus is provided with both direct and alternating current magnets to operate on the older d.c. section between Gordonsville and Charlottesville, and also on the new a.c. installation extending to Staunton.

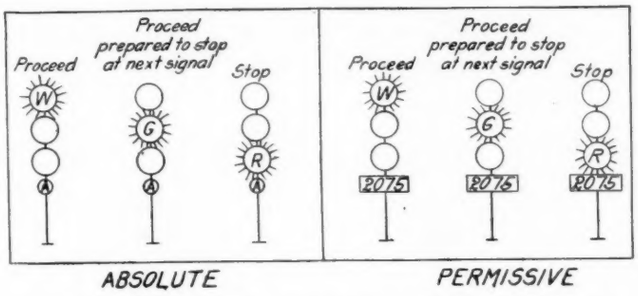



**Fig. 4—Names and Aspects of Light Signal Indications**

### Operating Difficulties on This Stretch of Single Track

The C. & O. operates two lines between Richmond, Va., and Clifton Forge. Most of the traffic moving from the coal fields of West Virginia to tide-water is handled over the southern route through Lynchburg, while the coal and other freight to and from Washington, Baltimore and northern connections is handled by way of Gordonsville. In addition to this rather heavy freight movement, the through passenger trains between the West and Washington run by way of Gordonsville to Clifton Forge and west. This line crosses rough country with a continuous succession of curves and several long grades, some of which are from 1.13 to 1.42 per cent and from 1 mile to 14 miles in length. There are 5 tunnels totaling 1.5 miles in length in the 40 miles from Charlottesville to Staunton. On account of the physical characteristics, the high cost of constructing a second track was not considered to be justified by the present traffic. Therefore, the problem was to increase the track capacity of the single track line by the installation of signals. As it is the policy of the C. & O. to contribute its share to the development of automatic train control, it was also decided to extend the present installation of train control between Gordonsville and Charlottesville, through to Staunton.

### Special Signal Indications Developed

The absolute permissive block system for single track signaling is used, that is, the head block advance signal at a siding gives an "absolute stop" indication for an opposing train movement between sidings, but a "permissive" indication for following train movements. The absolute signals, either high-mast, bracket, or dwarf, are designated by a sign showing the letter "A" without any number (see Figs. 1 and 2) and are located at passing points, at the entrance to blocks and at tunnels. The permissive signals, either high-mast or bracket, are located at intermediate points, i.e., between stations, and are designated by number plates (see Fig. 3). All signal indications are given by colored lights arranged in a vertical row. On the high signals the indications are as follows:

| | | |
|---|---|---|
| Top Light | White | Proceed |
| Second Light | Green | Proceed with Caution |
| Third Light | Red | Stop |
| Fourth Light (Displayed with red light only) | Amber | Proceed under Rule Bl. |

Absolute dwarf signals, as shown in Fig. 2, are located at clearance points at the ends of passing sidings at the

entrance to a block, to control movements from the sidings to the main track.

For the dwarf signals, the indications are as follows:

| | | |
|---|---|---|
| Top Light | White | Proceed |
| Second Light | Green | Proceed with Caution |
| Third Light | Purple | Stop |

The several aspects are shown in sketches in Fig. 4. The rules governing train movements under these signal indications are as follows:

Rule A—"An absolute signal indicating stop must not be passed without authority from the chief train dispatcher, except, if unable to communicate with the chief train dispatcher, the train may, if time table or train order superiority permits, proceed under protection of a flag."

Rule B—"When a permissive signal indicates stop, a train will stop before reaching the signal and then proceed with caution, looking out for a train ahead, car on a siding fouling the main track, a misplaced switch, or a broken rail, regulating speed so that it can be stopped within the scope of the engineman's view; except that a train moving under flag protection from the absolute signal, as per Rule A, shall continue to proceed under flag protection until it has reached a signal which indicates caution or proceed."

## Signal Layout Saves Minutes at Meeting Points

As with any single track installation, the signaling at the sidings is the important factor. It is difficult to lay out an arrangement which will allow flexible movements of trains under control and at the same time provide adequate head-on and trailing protection if the engineman should not be on the alert. The C. & O. has instituted several unique features that assist materially in expediting train movements at these points. A typical layout at a passing siding at Crozet, Va., is shown in Fig. 5. It will be noted that the layout consists of westward absolute signal A-1943, westward permissive signal 1941; eastward absolute signal A-1954, and eastward permissive signal 1952. Ramps are located braking distance in the rear of signals 1941 and 1952, i.e., the train passes the ramp previous to its arrival at the signal.

We will assume that westbound train W and eastbound train E are to meet at Crozet. When train W enters the east end of the block east of Crozet, absolute signal A-1954 displays the "Stop" indication, signal 1952 displays the "Restricted Speed" indication (red and amber), and ramp R in the rear of signal 1952 is de-energized. Likewise with train E approaching, the absolute signal A-1943 and signal 1941 display the "Stop" and the "Restricted Speed" indications respectively, and the ramp R, in the rear of signal 1941 is de-energized. The rule covering this special restricted speed indication is as follows:

Rule B-1—"A permissive signal, i.e., signal 1941, indicating stop, when the amber light shows below the red light, may be passed at low speed. When the amber light is not burning the signal shall be regarded as a permissive signal. See Rule B."

Train W, upon approaching the meeting point, receives the "Caution" indication (yellow) at signal 1931. On approaching signal 1941 if the engineman is alert and sees the restricted speed indication he can pass the ramp in the rear of signal 1941 without an automatic application of the brakes, providing he has reduced speed to less than 12 m.p.h. and also providing the permissive lever on the engine is operated while passing over the ramp. The train then continues past signal 1941 at a speed not over 12 m.p.h. and enters the siding without coming to a full stop.

Train E approaching from the other direction receives

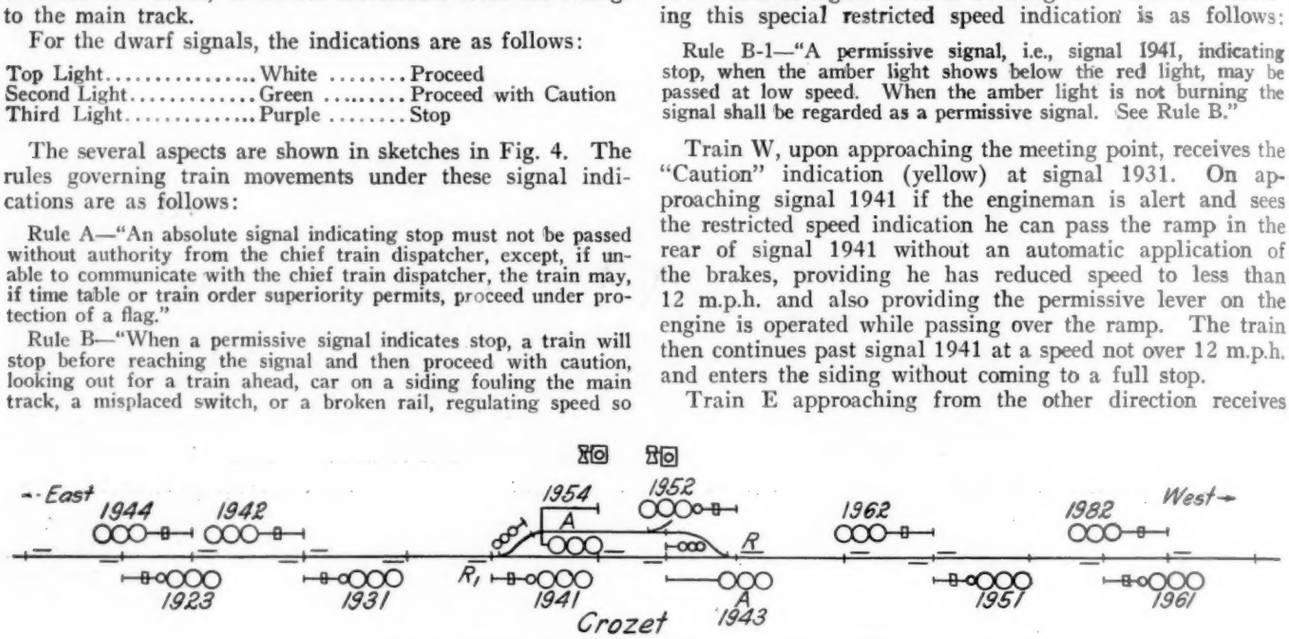



**Fig. 5—Typical Track and Signal Layout at Siding**

similar indications and may proceed at restricted speed past the ramp in the rear of signal 1952, and signal 1952, provided the engineman acknowledges these indications with the permissive lever. In case train W is not yet in the clear on the siding, train E is brought to a stop at absolute signal A-1954, while if train W is in the clear, eastbound train E can proceed without stopping, provided the block is clear to the next station. Therefore, it will be seen that trains may meet without stopping unnecessarily, if the enginemen are alert, while adequate head-on and trailing protection is afforded if the signal indications are not obeyed.

For example, assume that train E is on the siding at Basic, Va., Fig. 6, waiting for a westbound train W to pass, then both the eastbound absolute signal A and the absolute dwarf signal D give the absolute "Stop" indication. Both the high signal A and the dwarf D are located opposite the point of clearance for the siding. Therefore, there is no room for doubt on the part of the engineman as to where he must hold his train. Another advantage of this layout is that if westbound train W makes a station stop, train E can proceed east in the meantime on the clear indication of the dwarf signal which indicates "Proceed," as soon as the rear of westbound train W passes signal A. This movement of train E out of the siding is protected against any back-up move of train W by signal A.

As a different example, assume that eastbound train E had been making its station stop on the main track at Basic, while westbound train W had been approaching, then train W would have found the permissive signal 2071 giving the

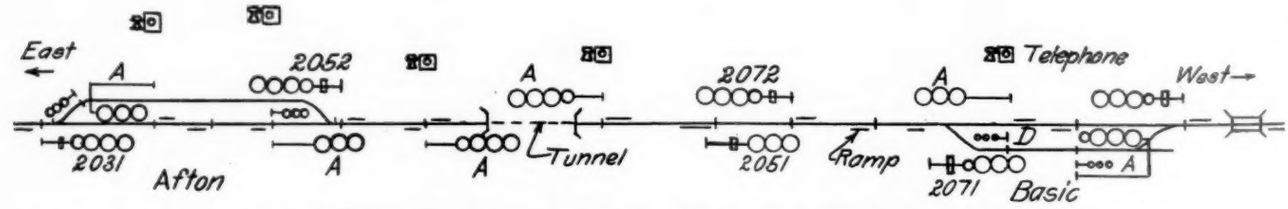



**Fig. 6—Typical Signal Layout Between Sidings, Including Tunnel Protection**

"Restricted Speed" indication. Under this condition westbound train W would have been permitted to proceed into the passing track without coming to a full stop at signal 2071. (See Rule B-1). With westbound train W making this move into the passing track, the eastbound absolute block signal A will not indicate "Proceed" for eastbound train E until train W is in the clear on the siding and the switch and derail lined up. The same layout is applied at each end of every siding. Therefore it may be seen that every move at sidings is protected; that there is no chance for an engineman on a siding to pull by the clearance point and cause delays, and also that a train on a siding can go as soon as the block is clear.

Where passing tracks are long and the ramps located in the rear of the signal governing the entrance to the passing tracks are too far out to enforce restricted speed, a second ramp is located between the ends of passing tracks to shorten the restricted speed zone and allow trains to close in and do station work when waiting on a meet. An example of this layout is shown at Afton in Fig. 6.

An interesting case developed at Fisherville where the station was so located that a train making the station stop did not clear the passing track switch, preventing any other train from entering or leaving the siding. This kind of an arrangement did not fit in with the new signal layout and operating scheme and it was planned to extend the passing track approximately 500 ft. However, it was suggested that the train control ramp could be placed alongside the station platform and that the signal could be supported from a bracket that would clear the platform. The ramp is shown in Fig. 7. Therefore, the station platform was merely extended 200 ft. east and the same result accomplished as if the passing track had been extended 500 ft. west. At certain stations where the absolute advance signal is in line with the permissive signal entering the station, the advance signal is burned at a reduced voltage to prevent a chance of mistaking one signal for the other.

### Special Protection at Tunnels

Ordinarily the signals between sidings are permissive signals (see Rule B). However, the signals at the entrances of tunnels are absolute signals, i.e., they have no number but have the marker A the same as the head block signals. Referring to Rule A, it may be seen that such a signal cannot be passed without permission from the chief dispatcher or under flag protection. The purpose of requiring an absolute stop at the tunnel entrance is to prevent two trains from being in the tunnel at one time, even for following moves. Referring to Fig. 6, it may be seen that after a preceding train has actually cleared the tunnel, there is no reason why signal A at the entrance of the tunnel should not then be treated as any other intermediate permissive signal to allow the second train to proceed at minimum speed. Therefore, an amber light is added below the regular signal, which is illuminated in addition to the red indication as soon as the preceding train has cleared the tunnel. This amber light can be seen readily up to 1,000 ft. Under this condition the second train may proceed, being governed by a special rule as follows:

> "An absolute signal indicating stop, when the amber light shows below the red light may be passed at low speed. When the amber light is not shown, the signal shall be regarded as an absolute signal."

In the several uses of this additional amber light, it should be noted that if the amber light should fail to be illuminated the indication is more restrictive, thus requiring a stop; therefore no hazard is introduced by the new indication.

In the locomotive cab are mounted small color-light signals that repeat the indication of the wayside signals. These cab signals indicate either the white or the green indications of the wayside signal. However, the red wayside indication is not repeated in the cab but is evidenced by the automatic stop.

Fig. 7—Ramp Located Along Platform

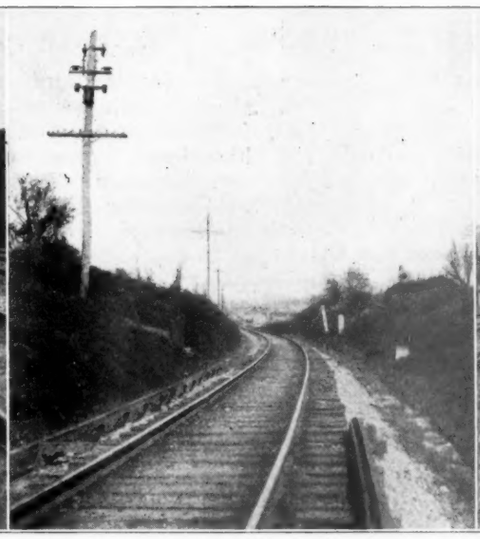


Fig. 8—Intermediate Ramp Location

Fig. 9—Absolute Signal and Ramp Location

### How Train Control Is Incorporated with the Signaling

The intermittent electrical contact type of train control including speed control and cab signals, as furnished by the American Train Control Company, is installed with this new signaling. Ramps are located alongside the track in the rear of each main line signal, i.e., a train approaching a signal will arrive at the ramp previous to its arrival at the signal. Ramps are also located at a few other special points as will be explained later. In brief, the operation of this train control system is as follows:

As the locomotive proceeds past one of these ramps the shoe on the locomotive rides up and down the incline. If the block is clear and the signal at proceed the current on this ramp is carried to the electrical apparatus on the locomotive that functions to prevent any exhaust of air from the train line while the shoe is passing over the ramp. If the immediate block is occupied and the signal is at danger

there is no energy on the ramp, and, provided the engineman does not take certain precautionary measures, the exhaust of the air in the train line as the shoe passes over the ramp will cause the brakes to be set. A detailed description of the construction of the American Train Control Company's equipment was published on page 846 of the *Railway Age* for March 28, 1919.

On approaching a permissive signal giving a stop indication, the engineman, if alert and by reducing speed to less than 12 m.p.h. can pass the signal without a stop provided he pulls the permissive lever while the shoe is passing over the ramp. He may then proceed through the block without interference from the train control, expecting to find a train

**Fig. 10—Absolute Signal on Bracket; Telephone Box Shown at Left**

in the block, a broken rail or a switch open. In view of the fact that there are many long grades on this line, the ability to pass a permissive signal at minimum speed without an absolute stop eliminates the necessity of stopping heavy trains on a grade for a permissive signal, and they may be kept moving at a minimum speed until the preceding train has time to clear the advance block. Further benefits are derived by allowing trains to close in under control at stations as described heretofore.

At any point where a ramp is located between signals it is distinguished by a special marker as shown in Fig. 8. The ramp marker consists of a standard R. S. A. cast-iron electric lamp case with No. 18 gage sheet metal background, 18 in. in diameter, on an R. S. A. adjustable lamp bracket, the whole being supported on a standard cable post. The background is painted white and serves as the marker. It is illuminated at night by reflected light. The reflection is obtained by placing a small disc directly in front of the lens and about 6 in. away. The side of the small disc toward the engineman is painted black and the side toward the lamp white to assist in the reflection of light on the large disc. The engineman is shielded from all direct light from the lamp and observes only the large white disc with the black spot in the center, both day and night. Provided the first train clears the block before the second train reaches the intermediate ramp, energy is supplied to this ramp so as to operate the control equipment on the locomotive in such a way as to remove the minimum speed control restriction.

In simple words, this train control system increases the track capacity by keeping trains moving when there is no need for a tonnage train to come to a stop at a signal indicating "Stop," when that indication is caused by a preceding train that may soon clear the block. The train control ensures safety by enforcing a train stop for all conflicting train movements and at all signals indicating stop when the engineman is not alert and does not have his train under control at a specified speed.

As indicated in Rule A, a train must not proceed past an absolute stop signal except under flag protection without permission from the chief dispatcher; therefore, some ready means of communication is necessary. A separate metallic telephone circuit of two No. 10 bare copper wires was installed through the 40-mile section, with special telephones at all absolute signals, viz., at the ends of sidings and at the entrances to tunnels.

## Economies Effected by the Signaling

The cost of operation of this signaling system amounts to approximately $4.13 per mile per month, which includes the a.c. current supply, the oil and gas for motor cars and incidentals. The maintenance charges for signal maintainers' wages are $17.78 per mile per month. These costs are being based on a new installation without any heavy repair charges and without allowance for the automatic train control in connection with the signal installation, as included in the above figures, which increases the cost of maintenance and operation over that for a simple automatic signal system.

## Signal Construction Features

The signals, instruments, cases, relays, track transformers, switch circuit controllers, etc., for this installation were furnished by the Union Switch & Signal Company. The high signals have an inner lens that has the color and proper optical characteristics so that when arranged with the outer 8⅜ in. clear lens a doublet is formed which gives the proper range. Provision is made for the mounting of a 10 or 20 deg. deflecting prism in order that the angular spread may be increased where signals are located on curves. These signals have a minimum range of 4,500 ft. under adverse conditions of bright sunlight. The dwarf signals have a 6⅜ in. lens illuminated by two single filament lamps giving a minimum range of 1,000 ft.

In order that the absolute signal can be located adjacent to the main track opposite the point of clearance of the siding, it was necessary to place the signal on a bracket at one end of every passing track, as shown in Fig. 10. These brackets are made of special light steel lattice work and were furnished to the railroad by the Bates Expanded Truss Company.

## A.C. Transmission Line

A separate pole line for the signal feeder and control circuits was constructed from Charlottesville, Va., to Staunton.

The three conductors for the 3-phase 6,600-volt a.c. feeder circuit are bi-metallic reinforced stranded aluminum equivalent to No. 6 copper, two of which are carried on the short top arm and one on the pinnacle pin. This line has sufficient additional capacity to carry the load of lighting the stations, and operating a few pumping plants.

Sectionalizing switches are installed in the line at intervals of five miles. This enables the signal department to sectionalize the line in making repairs without killing the entire line and also enables it to have one or more sections dead in case of trouble, i.e., if the line should break ten miles out of Charlottesville they will be able to feed from Charlottesville and from Staunton to the point of trouble and keep all signals working except those in the block where the trouble exists. Power is purchased from the local power companies at Charlottesville and Staunton.

This signal and train control installation was made under the supervision of Charles Stephens, signal engineer of the C. & O.

# A. R. A. Organizes "Regional Advisory Boards"

## Important Steps Taken to Study Transportation Needs and Enlist Co-operation of Shippers

ONE OF THE MOST INTERESTING and important of the developments that have occurred in connection with the efforts of the American Railway Association to bring about co-operation between the railways and the shippers which will help secure the most efficient utilization of existing railway facilities, has been the organization of five regional advisory boards to advise and work with the district managers of the Car Service division of the association, who are located at strategic points throughout the country.

The principal duties of the district managers of the Car Service division are to keep the division fully informed regarding the transportation needs of the various territories in which they are located, and to co-operate with the operating officers of the railways in these territories in securing that distribution and use of freight cars which will cause them to be handled so as to meet the needs of the shippers of each territory equitably and at the same time cause the greatest practicable amount of freight business to be handled. It is impossible, however, for the district managers to know intimately and fully the transportation needs of the shippers in their territories without some organized way of getting this information from the shippers.

The five existing regional advisory boards have been formed to establish the necessary contact and bring about the closest possible co-operation between the shippers and the railways in each territory, and the railways in the country as a whole.

### The Northwestern Regional Board

The first of these regional advisory boards to be organized was that for the northwest, which has its headquarters at St. Paul. It functions for the states of Minnesota, North Dakota, Montana, and Northern Wisconsin. The personnel of these boards and the various interests they represent cannot be better indicated than by giving the names and business connections of the officers of the Northwestern Regional Advisory Board. They are as follows: Chairman, J. F. Reed, president, Minnesota Farm Bureau Federation; vice-chairman, C. L. Mosher, vice-governor, Federal Reserve Bank, 9th District; secretary, Lee Kuempel, assistant manager, Minneapolis Traffic Association; assistant secretary, Herman Mueller, traffic manager, St. Paul Association of Commerce; vice-chairman (for Minnesota), W. H. Perry, traffic manager, Pillsbury Flour Mills; vice-chairman (for Montana), A. H. Stafford, president, Montana Farm Bureau Association; vice-chairman (for South Dakota), E. H. Eyler, president, North Dakota Co-operative Association; vice-chairman (for North Dakota), R. F. Gunkelmann, president, North Dakota Grain Dealers Association.

The following are members of the executive committee: C. L. Mosher, Federal Reserve Bank; H. M. Gardner, vice-president, Minneapolis Civic & Commercial Association; N. J. Holmberg, agricultural commissioner, State of Minnesota; Frank Milhollan, president, North Dakota Board of Railroad Commissioners; J. W. Raish, chairman, South Dakota Board of Railroad Commissioners.

The board has standing committees representing the (1) grain, (2) flour, feed and hay, (3) coal, (4) potato, fruit and produce, (5) lumber and (6) live stock interests and (7) one on miscellaneous traffic. The members of these committees are all actively engaged in producing or dealing in the commodities mentioned and are prominent farmers and business men in their various territories.

Regular meetings are held throughout the territory of each board, usually alternating between the different states. Designated officers of the lines serving the territory meet in conference with it. Regular docket forms are sent to each railroad representative and to each member of the board 10 days prior to each meeting so as to enable both railroad men and shippers to come to the conference fully prepared with all facts regarding the matters submitted by both shipper and carrier for disposition. The sub-committees on commodities, each with its own chairman, meet with the railroad representatives as often as transportation conditions may require, as affecting the transportation of the particular commodity. At each meeting a manager of the Car Service division from Washington, D. C., as well as the district manager in that territory, are in attendance. Each member of the board is appointed because of his station in his particular line of endeavor. He is responsible for the mobilization of his own industry and the confidence of his own people.

Patterned after the organization in the northwest, similar boards have been instituted as follows:

Southeastern Regional Advisory Board, for Florida, Georgia, South Carolina, North Carolina, Tennessee, Alabama, Mississippi and eastern Louisiana.

Southwestern Regional Advisory Board, for western Louisiana, southern Oklahoma, Arkansas, Texas, New Mexico and Arizona.

Trans-Missouri-Kansas Advisory Board, for northern Arkansas, northern Oklahoma, Missouri, Kansas, and as far west as Colorado common points.

Central Western Advisory Board, for Nebraska, southern Wyoming, northern Colorado, Utah and Iowa.

It is proposed to create a similar organization to function with the district car service manager for Iowa, southern Wisconsin, Illinois and Indiana, and one in each of the territories now served by the district managers at Toledo and Cincinnati. After these are established possibly two additional boards will be created, one in the east and one on the Pacific Coast.

### Purposes and Functions of Boards

The organization of these regional advisory boards has been effected chiefly by Donald D. Conn, manager of the Public Relations department of the Car Service division. Their purposes and functions are outlined in the following statement which has been prepared by Mr. Conn for the *Railway Age*:

"It is sound that shippers, state commissions and individual railroads, together with interrelated interests of the railroads as expressed through the Car Service division, should, by mutual agreement and active co-operation, organize the mediums necessary to anticipate the transportation needs of given regions, and to promote the informal settlement of transportation disputes which may arise between the public and the railroads. When shipper and carrier can agree as to fundamental facts governing any of their relationships, there should be no disagreement as to conclusions or the necessary procedure therefrom.

"It is folly for us to believe that the railroads and shippers, or any one group of railroads and its shippers, are so far removed from informal negotiations as to make necessary the increase of government interference in the regulation of a private business. Private and competitive operation of our railroads brings into play all of the fundamental principles

upon which the great institutions of this country have been builded, and the real foundation and background for these regional boards is based upon the perpetuation of that system, which has been tried out and has produced the most efficient transportation machine in the world.

"Private and competitive operation of our railroads under governmental regulation can be successful only by the limitation of governmental regulation to its appropriate field and upon the general premise that private management necessarily contemplates the greatest freedom in the application of economic law consistent with the public interest. It may be stated, without qualification, that under our form of government, it is not the province of government to enter the field of regulation wherever it can, but rather only wherever it should, to protect the public interest. Business and operating conditions on the railroads, like business and operating conditions in other industries, are peculiarly sensitive to uncertainties, and are often restricted to public injury by too drastic and too rigid public requirements.

"We might say that the above represents a definition, in a general way, of the line of demarcation between the perpetuation of the sound principles of our existing basis of operation and the continued inroads of government into the railroad business. A mutual recognition of this basic principle in the relationships between the public and the railroads is fundamental to the success of the regional advisory boards. In the final analysis it is as important to the farmers and industries of the country as is the every day success of their own undertakings.

"The initial step towards this goal which we are all striving to reach is represented by a complete understanding of the mutual problems of the railroads and shippers. This can best be secured by setting up these forums of public opinion where the facts concerning any given relationship may be determined and future procedure agreed upon by those directly interested and affected. Obviously, no one knows the various problems and conditions of shipper or carrier better than do the authorized representatives of the shippers and carriers themselves. The shortest route towards a correct and proper understanding of local territorial conditions and to the amicable settlement of all differences between the carriers and shippers is to be found through the offices of a continuing board of research, negotiation and adjustment.

"Perhaps more fundamental than any other one factor governing transportation and car problems is the paramount need for a constant, accurate analysis of production, markets, and channels of distribution of the commodities offered for shipment in the various districts of the country. Such a study carried to its conclusion brings to the foreground the importance of adjusting not only the various units of transportation, such as the number of cars, number of locomotives, traffic and terminal facilities, but also industrial and agricultural facilities, such as storage, loading and unloading facilities. We also find that methods of sale and distribution processes have a very material effect upon the ability of transportation to supply cars and to adjust the machine to meet any 'load' in any district of the country upon demand.

"After all, the item of rail transportation represents but one factor in our total process of distribution, so that there does exist a responsibility upon every class of industry and every branch of agriculture to so correlate its efforts with the transportation factor as to assure the maximum use of the railroad machine and the most efficient methods of handling commodities from where they are produced to their point of consumption.

"To study these fundamental factors in each territory of the country represents one of the purposes of bringing representatives of industry, agriculture and transportation together periodically. Manifestly results can only be obtained through decentralization processes and greater supervision over the local needs and practices of shipper and carrier. These organizations, therefore, are contrary to the policy of further centralization, which is being continually advocated, which always brings forth artificial and temporary remedies when the cure lies in the adjustment of local and detail economic problems.

### Points on Which Organization is Based

"The following seven points have been given to the representatives of industry and agriculture as a basis for organization of the five regional boards which have been instituted:

(1) To form a common meeting ground between shippers, local railroads, and the carriers as a whole as represented by the Car Service division, for the better mutual understanding of local and general transportation requirements, to analyze transportation needs in each territory, and to assist in anticipating car requirements.

(2) To study production, markets, distribution and trade channels of the commodities local to each district, with a view of effecting improvements in trade practices when related to transportation, and promoting a more even distribution of commodities where practicable.

(3) To promote car and operating efficiency in connection with maximum loading and in the proper handling of cars by shippers and railroads.

(4) To secure a proper understanding by the railroads of the transportation needs of shippers, that their regulations may fit shippers' requirements and, on the contrary, to secure understanding by the shippers and their cooperation in carrying out necessary rules governing car handling and car distribution.

(5) To acquaint shippers and railroads in each section of the country of the seasonal requirements in their sections, in order to promote intelligent co-operation in the handling of equipment between the different districts of the country.

(6) To adjust informally car difficulties which may arise in each local territory between the carrier and shipper.

(7) To give the shipping public a direct voice in the activities of the Car Service division on all matters of mutual concern.

"The organization of these boards is predicated upon confidence and fair dealing between one class of shipper and another, between one railroad and another and between the shippers as a unit and the railroads as a whole in any given district. The boards are and should be composed of big men, for in the final analysis the personnel itself, dealing with all problems justly and fairly to everyone concerned, forecasts the carrying through of the underlying thought and purpose governing their establishment—a better understanding of all mutual problems and the closest possible relationship between shippers and carriers as a whole in any given district of the country."

### Regional Boards in Other Territories

The officers of the Southeastern Regional Advisory Board are as follows: Chairman, A. G. T. Moore, traffic manager, Southern Pine Association; alternate chairman, M. M. Caskie, secretary, Southern Traffic League, traffic manager, Alabama Farm Bureau Federation and traffic manager, Montgomery Chamber of Commerce; secretary, A. S. Lucas, chairman Birmingham District Iron and Steel Traffic Association.

The full personnel of the standing committees has not been selected, but the following list gives the board members in addition to those cited above: Thomas P. Goodwin, Mississippi Farm Bureau Federation; H. T. Moore, Atlanta Freight Bureau; T. M. Henderson, Traffic Bureau of Nashville; Thomas E. Grady, Savannah Traffic Bureau; L. F. Hollands, traffic manager; J. J. Newman Lumber Company; B. F. McCamey, district manager, Southern Hardwood Traffic Association; Wm. Boyd, Nashville Grain Exchange; W. A. Gunn, Ralston Purina Co.; T. A. Bosley, Virginia Carolina Chemical Co.; M. B. Greenough, Southern Clay Manufacturing Company; J. S. Farish, traffic manager, Georgia-Florida Saw Mill Association; R. G. Cobb, Mobile Chamber of Commerce; E. D. Dow, traffic manager, Florida

Citrus Exchange; R. C. Copeland, W. L. Shepherd Lumber Co.; J. A. Mulcahy, Alabama Farm Bureau Cotton Association; W. R. Hendley, Spartanburg Transportation Association; B. B. Cheek, traffic manager, Georgia Cotton Growers Co-operative Association; J. W. Sibley, Southern Clay Products Association, and Wm. C. Ermon, traffic manager, Southern Cotton Oil Company. Certain additional members of this board are yet to be selected.

The officers of the Southwestern Regional Advisory Board are as follows: Chairman, J. H. Johnston, traffic manager, Oklahoma Cotton Seed Crushers Association; alternate chairman, T. P. Duncan, vice-president and general manager, Wichita Millers Elevator Company; secretary, F. A. Leffingwell, traffic manager, Texas Chamber of Commerce. Members of the Executive Committee: J. H. Johnston, T. P. Duncan, A. G. T. Moore, B. L. Anderson, Neil P. Anderson & Co., Fort Worth, Texas; E. B. Spiller, general manager, Texas and Southwestern Cattle Raisers Association; A. P. Rudowsky and W. T. Hancock.

While complete membership of this board awaits further selection of board members the following comprise those members who have not been shown above: F. G. Abbey, traffic manager, Neil P. Anderson & Co.; F. C. Broadway, traffic manager, Exchange Saw-Mills Sales Co.; W. Q. Church, traffic manager, W. R. Pickering Lumber Co.; W. F. Craddock, traffic manager, Texas Farm Bureau Federation; H. J. Fernandez, traffic manager, Monroe Chamber of Commerce; W. I. Johnson, traffic manager, Texas Gulf Sulphur Co.; J. W. McCann, traffic manager, Anderson Clayton & Co.; B. T. McCann, traffic manager, Southern Hardwood Traffic Association; C. J. Mansfield, representing Pine Mills of Arkansas; Rhea Miller, manager, J. Fred Smith Gravel Co.; B. F. Smith, traffic manager, Industrial Lumber Co., and Producers Turpentine Co.; H. G. Struble, president Oklahoma Industrial Traffic League; G. F. Thomas, traffic manager, Arkansas Soft Pine Bureau, J. G. West, traffic manager, Texas Portland Cement Co.

The Central Regional Advisory Board has just organized and while the personnel is not entirely completed the following officers have been elected: H. G. Taylor, chairman, Nebraska Railroad Commission; J. W. Shorthill, secretary, Nebraska Live Stock Association and National Farmers Grain Dealers Association; C. E. Childs, director of traffic, Omaha Chamber of Commerce.

Temporary chairmen of the following committees have been selected who in turn are charged with the responsibility of building up their particular committees: J. A. Kuhn, for grain and mill products, traffic manager, Omaha Grain Exchange; A. F. Stryker, for live stock, secretary, Omaha Live Stock Exchange; H. A. Leypoldt, for grain and hay dealers, North Platte, Nebraska; H. O. Werner, for potatoes, fruits and vegetables, secretary, Nebraska Potato Growers Association; Lloyd Hansen, for road and building materials, Hastings, Nebraska; A. B. Currie, for coal and petroleum, Omaha, Nebraska; W. S. Whitten, for miscellaneous, and l.c.l. freight, secretary, Lincoln, Nebraska, Chamber of Commerce.

The organization of the Trans-Missouri-Kansas board had just taken place and while the entire membership has not been completed the following officers have been elected: Chairman, Clyde M. Reed, chairman, Kansas Public Utilities Commission; alternate chairman, C. B. Bee, rate and transportation expert, Missouri Railroad Commission; vice-chairman for Kansas, Q. O. Wolfe, Kansas Farm Bureau Federation; secretary, J. H. Tedrow, traffic manager, Chamber of Commerce, Kansas City, Mo.

In addition the following board members, while not a complete list of the personnel, have already been selected: M. A. Gray, H. D. Lee Mercantile Co.; A. M. Gaines, zinc and lead ore; R. T. Willette, Atchison, Kan., Chamber of Commerce; R. W. Moore, Dewey Portland Cement Co.; R. E. Lawrence, farmers co-operative grain dealers; J. E. Johnston, Southwestern Lumber Association; W. R. Scott, board of trade; T. O. Vest, Hegle Zinc Co.; C. B. Hutchings, American Farm Bureau; E. S. Gubernator, Lehigh Portland Cement Co.; Charles R. Weeks, Kansas State Farm Bureau; B. L. Glover, cement; John L. Hogan, traffic manager, Abilene Flour Mills Co.; W. D. Wells, traffic manager, W. S. Dickey Clay Manufacturing; C. D. Dooley, M. Peet Bros. Manufacturing Co.; C. E. Warner, Southwestern Interstate Coal Operators Association.

The personnel of the officers and members of these advisory boards have been given in such detail to show the high standing of the shippers who have consented to serve on them.

### Views of President of Minnesota Farm Federation

As already indicated, the first of these boards to be organized was that for the northwest and its chairman is J. F. Reed, president of the Minnesota Farm Bureau Federation. Mr. Reed has made the following statement regarding the purpose and working of this board:

"The fundamental thought in the formation of the Northwest Regional Advisory board in the minds of the 50 members of which it is composed was to arrive at a proper understanding of the problems of the shippers and transportation companies in the region affected; to prevent, if possible, a repetition of freight congestion at periods of greatest demand; by careful survey to anticipate the need for equipment properly to move the various products of the farms, mines, factories, mills, and miscellaneous shipping promptly, and to furnish this information to the roads and urge their co-operation; to secure adequate equipment where needed and see that prompt and maximum loadings are made by shippers and that prompt and speedy movement is made by the carriers.

"At all meetings of the board the necessity for the roads to build up their available car supply by the prompt return of all cars on foreign roads and see that the cars are in proper condition for loading has been strongly emphasized. The proper distribution of cars has received attention.

"Relief to shippers of potatoes, grain, and flour has been brought about by this information and the prompt co-operation of the roads. Information obtained by the board regarding the condition of shipping of any commodity that is being hindered by lack of equipment when called to the attention of the roads has brought speedy relief if within their power.

"The attendance at the meetings of the board and the frankness and earnestness of the discussions of all the subjects considered and the disposition shown by representatives of the carriers to co-operate speaks volumes for the possibilities of the organization. A better understanding of the duties of the shipper to the carrier, and of the duties of the carrier to the shipper will certainly be affected. Lack of proper information of the rights and duties of shippers and carriers toward each other has been a fruitful source of misunderstanding. Such a careful study of the problems of each by the other, as made possible by this board is sure to inure to the benefit of both."

### Decentralization is Absolutely Necessary

J. H. Johnston, secretary-treasurer of the Oklahoma Cottonseed Crushers' Association, who is chairman of the southwestern board, says:

"Having since 1912 been advocating regional commerce commissions as a substitute for rate regulation by the various states, it was an easy matter to sell me on the subject of regional advisory boards to the Car Service division of the American Railway Association. As a matter of fact, I cannot see how any man who believes in regional banks and circuit courts, can believe that we can efficiently do the busi-

ness of the largest single industry which we have in the United States satisfactorily, either through state units or one centralized authority at the capital of the nation. The state units are too small and the national unit too large for practicability, either in banking, law giving, rate making or car distribution. Therefore, when I received the invitation to attend the organization meeting of the Southwest Advisory board, I very promptly signified my acceptance.

"The decentralization of car service direction is absolutely necessary in my judgment for the following, among other reasons, (a) for personal touch with the business involved; (b) for quick action in emergency, and a car shortage is always an emergency; (c) for co-operation and joint responsibility as between shippers and carriers; (d) for the satisfaction of state authorities, who have a right to know, not only through their accredited representatives, but through their shipping clients, that everything possible is being done to take care of a difficult situation.

"It will be unnecessary for me to outline the work of our sub-committees, other than to say that we will expect every sub-committee to make the most careful estimates, in advance, of crop prospects, probable direction and time of movement, and everything else which will enable the carriers to determine as nearly as possible the character, condition, and amount of equipment and motive power which it will be necessary to have at a given time to take care of the crops.

"We will then get together periodically in advance of the movement and have a heart to heart talk with the representatives of the carriers, so that everything possible may be done to make every car not only perform 100 per cent, but 125 per cent, of the service which has heretofore been secured from each transportation unit. We also look for a very marked degree of co-operation on the part of the transportation representatives in advocating before their railroad traffic associates certain concessions, in the matter of exceptions to minimum weights, in return for which the shippers' representatives will pledge the heaviest possible loading of cars and the highest possible minima.

"Again, the shippers' traffic representatives on these regional boards will be able to act as missionaries in smoothing out the difficulties which may arise between the carriers and the state authorities over car distribution, as we feel sure that the purpose of each is to give and secure the best possible service and that to avoid friction it is only necessary that each party understand fully the viewpoint of the other.

"It remains to be seen how closely the carriers will follow out broad principles of taking care of shippers on short and weak lines, which are not able to supply their full quota of cars for the movement of crops originating thereon; this is the crux of the whole proposition.

"We are now entering upon a test of the practicability of car distribution under individual ownership, through the closest possible co-operation of all parties interested, and we are hopeful that the result will justify the present enthusiasm of its advocates. Of this I am quite certain, viz, that we have everything to gain and nothing to lose by giving the new movement our most cordial co-operation and support."

---

THREE TRACKMEN have been arrested in connection with three freight train wrecks which have occurred on the Wabash Railway at New Paris, Ind. They are said to have confessed and to have given as a reason for wrecking the trains their desire to make more work for themselves, which would necessitate overtime. The trains were thrown off the track by the opening of a derail. The first wreck occurred on July 26, 1922, with damages of approximately $1,000; the second occurred in December, 1922, with about the same amount of damage and the third on April 1, 1923, with damages of $50,000.

# New York Law Calls for Electrification Throughout N. Y. City

BY A LAW passed by the Legislature of New York, recently adjourned, and signed by the Governor on June 2, all railroads within the limits of New York City are required to abolish the use of steam locomotives within the city by January 1, 1926. The railroads affected made strong protests before the Governor, asking that the bill be vetoed, because of the great cost of complying with it; but arguments in favor of the law were presented by a great number of associations of citizens. The line which figured most prominently in the discussions prior to the passage of the law is that of the New York Central on the west side of Manhattan Island, extending southward from Spuyten Duyvil, 12 miles, to the large and important freight stations at 60th street, 33rd street and St. John's Park. For miles along this freight line the adjacent territory is now filled with costly residences.

The New York Central Company, in its protest before the Governor, set forth that the electrification of this line would be unduly costly because the use of the third rail is objectionable in the city streets, through which the tracks run for a long distance; because overhead wire lines have been forbidden everywhere throughout Manhattan for many years, and because the only other practicable means of electric propulsion, the storage battery, has not yet been sufficiently developed for use in hauling heavy freight trains, with which this line must deal.

After the New York Central, the company most seriously affected is the Long Island, which already has a considerable mileage of electrified lines within the limits of New York City but which estimates that to comply with the law would require the electrification of additional lines involving a cost of probably $30,000,000. This estimate includes a considerable mileage outside of the city limits which, for economy and convenience in operation, would necessarily have to be electrified at the same time as those portions of the lines within the city. The total length of road involved is 123 miles; length of tracks 506 miles.

Representatives of the Baltimore & Ohio and the New York, New Haven & Hartford also appeared before the Governor. Mr. Degersdorf, for the Baltimore & Ohio, said it would cost his company at least $17,000,000, and Mr. Barnett for the New Haven estimated the cost for his company at $5,000,000.

The Baltimore & Ohio lines are on Staten Island. The lines of the New Haven affected are the Harlem River branch and the connection to the Long Island over Hell Gate bridge. These are already mostly electrified, but the new law would require some additions and also necessitate the use of additional motors.

There is talk of going before the next Legislature with a protest against the drastic requirements of the law, but no definite statement is forthcoming from any road.

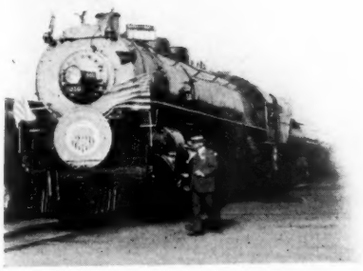
---

RAILROAD TAXES in New Jersey this year will aggregate $15,229,585 or $521,538 more than the total in 1922. Combined assessments of all of the railroads of the State place a valuation on the properties of $418,840,580, an increase of $4,601,694 over the preceding year.

THE MAIN LINE of the Southern Pacific between Portland, Ore., and San Francisco, Cal., was cut in two by the burning of the timber lining and by the caving in of both ends of a 400 ft. tunnel on the Shasta route near Coram, Cal., on May 21. A temporary track was built around the tunnel and operation was restored on May 29.

# Union Pacific Promotes Get-Together Field Day

## Meeting Promotes Realization That Farmers, Business Men and Railroads Have Mutual Interests



*President Gray Inspecting One of the New Passenger Locomotives*

DECLARING that the farmer's troubles are the railroad's troubles and that both must co-operate to solve them, C. R. Gray, president of the Union Pacific, sounded the keynote of a get-together movement between the three great industries of the country, the railroads, the farmers and business men at North Platte, Neb., on May 31. Such a movement should result in bringing about closer harmony and a better understanding between all classes and should ultimately result in the solution of some of the most difficult problems before the country today. Mr. Gray asked that the railroads be considered as "business men" whose interests are identical with the farmer and the shipper and said that through co-operation on the part of the farmers, the business men and the railroads many of the present-day problems would cease to exist.

### Union Pacific Day

"Union Pacific Day" was celebrated at North Platte, Neb., on May 31, under the auspices of the Wyoming division safety committee, the Chamber of Commerce, the Rotary Club, the Kiwanis Club and the Lions Club of North Platte. Special trains were run from Cheyenne, Wyo.; Denver, Colo.; and Omaha, Nebr., to accomodate citizens of those and intermediate points, and officers and employees of the Union Pacific railroad. The general officers and many of the officers from the different divisions were in attendance. Approximately 6,000 farmers, railroad men and representative business men came to North Platte to celebrate the day.

The program was opened in the morning by a public meeting of the Wyoming division safety committee. At this meeting A. D. Hamilton, of the Bureau of Safety, of the Interstate Commerce Commission spoke on safety measures and safety devices. President Gray, in a few words, said that team spirit made possible such a meeting, for neither the officers alone or the men alone could have arranged so successful a meeting. After the meeting there was a parade of the citizens, farmers, business men and railroad men, led by Mr. Gray. Music was furnished by three bands. After motion pictures were taken, all were conveyed by automobiles to the state experimental farm three miles out where a "wiener roast" had been prepared under the auspices of the Chamber of Commerce of North Platte. After lunch, the gathering was addressed by W. G. Edens, vice-president of the Central Trust Company of Chicago; Dean Burnett of the Agricultural School of the State University of Nebraska; D. P. Hogan, director of the Federal Land Bank and Mr. Gray. After returning to North Platte a meeting was held in the Keith Theater, at which time Mr. Gray presented the system safety first banner to W. M. Jeffers, general manager for the Union Pacific, as this line won it in the competition with the other three roads making up the Union Pacific system. In the evening a complimentary dinner was given to between 600 and 700 guests in the Union Pacific depot. Addresses were delivered by M. E. Crosby, mayor of North Platte; Mr. Gray; W. N. Doak, vice-president, Brotherhood of Railroad Trainmen; J. J. Halligan, attorney and farmer; A. L. Konold, general chairman, B. of L. E. of the Union Pacific; A. G. Crane, president, Wyoming State University and Clarence S. Howard, president, Commonwealth Steel Company, St. Louis, Mo.

### The Safety First Work

H. A. Adams, assistant to the general manager in charge of safety matters, said at the afternoon meeting that during 1920, there were 1,764 casualties to employees on duty, passengers, persons carried under contract, trespassers, non-trespassers and employees not on duty on the Union Pacific. During 1921 there were 744 like accidents while in 1922 there were only 606 casualties. The year 1922 showed a net decrease in casualties of 65.65 per cent under 1920 and 18.55 per cent under 1921. These large reductions gave the Union Pacific 6.56 casualties per million man hours to employees' duty and passengers and persons carried under contract during 1922. This record, Mr. Adams stated, was far ahead of any other railroad in the United States, based on figures compiled by the Interstate Commerce Commission. This record resulted from the management permitting an intensive campaign to be carried on and from the interest manifested by the men.

Referring to the reduction in automobile accidents at grade crossings, Mr. Adams stated that in 1921 there were 160 accidents, resulting in the death of 18 and the injury of 41 persons while in 1922 there were 162 such accidents in which 8 persons were killed and 18 injured. The decrease in the number killed in 1922 was 55.6 per cent and in those injured, 56 per cent. While the number of accidents which occurred showed a slight increase in 1922, the Union Pacific was able to show a total decrease of 8.29 per cent in the number of accidents per 1,000 registered automobiles in the states which it traverses.

**Enjoying the Wiener Roast at the State Experimental Farm**

### Mr. Gray Says Stable Railroad Policy Needed

At the dinner in the evening Mr. Gray said in part that what is needed more than anything else is a stabilized railroad policy throughout a period long enough to show what can be accomplished. The Transportation Act was the first step in this direction. The railroads have operated under this act for three years, none of which were normal years. In 1920 the railroads were operated for two months by the Government. In 1921 there was a surplus of cars and un-

employment. In 1922 the country was confronted with the coal strike and the shopmen's strike and coincident with them there started the greatest business revival ever known. In referring to the financial results, Mr. Gray said that in 1920 the roads as a whole earned 0.72 per cent on the bare value of the property; in 1921 this rose to 3.31 per cent and in 1922 to 4.14 per cent. The response to the better financial condition was immediate, as railroad directors authorized budgets totaling $1,540,000,000 for 1923, the greatest sum ever authorized. One reason for this is the fact that during these three years no important railroad laws have been passed by Congress or by any of the states.

Referring to government operation Mr. Gray said that the railroads had been taken over as a war measure and not through any inherent deficiency in them. It was natural that the period of common operation was a great dislocation of the carriers and that it was not anybody's fault, but a perfectly natural result. When the roads returned to private operation it was necessary to readjust two things at the same time: (1) Wages, as the largest increases in the world were put into effect by a government body and accepted by the railroads and (2) Rates, as a government body was instructed to grant increases in both freight and passenger rates. Both, Mr. Gray said, were economically unsound. They were not the result of business conditions but the inevitable result of circumstances. Continuing, Mr. Gray said that the railroad business was the only business where the word of the layman was better than that of the professional railroad man and is the only business not allowed to make a proper return on its investment.

Referring to those who are talking about the high valuation of the railroads, Mr. Gray said that they were forgetting the fact that the valuation made has not been directed by the railroads but by a government body representative of the people. All the railroads are entitled to and all they ask is a square deal. In order to have progressive and safe railroads they must have proper income and steady income under policies that are secure.

At the Experimental farm in the afternoon, Mr. Gray pointed out that in the final analysis the farmers were the favored class in that they constituted the backbone of the nation. He called attention to the value of scientific investigation and scientific farming and that with irrigation in Platte river valley the land should be made to produce three times what it now does. The Union Pacific is just as interested in this problem as the farmers and Mr. Gray asked that the farmers consider the railroad as among the business men of Wyoming and Nebraska who wanted to help in development work of this character and that the railroads had men just like themselves who wished to come in contact with the farmers and business men along the line. It was Mr. Gray's desire that all realize that the railroads are not the impersonal things that they are pictured to be.

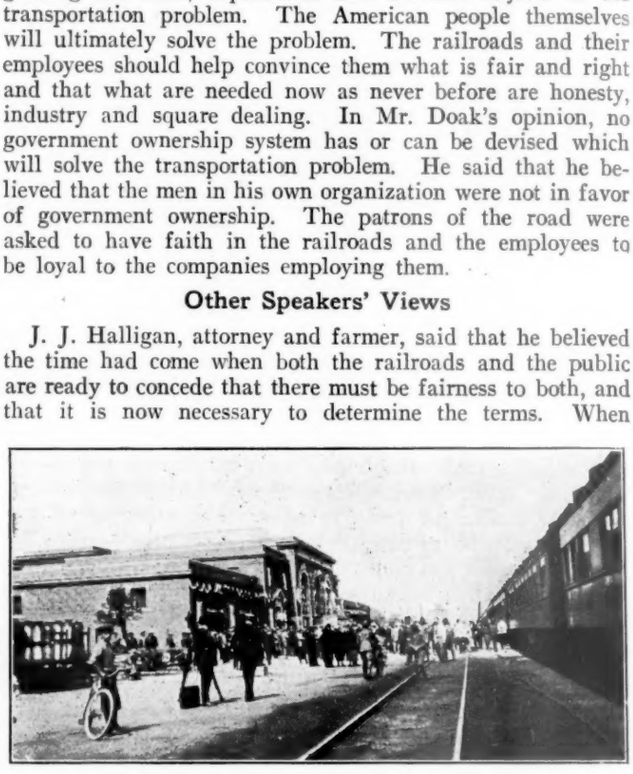
### W. N. Doak Against Government Ownership

W. N. Doak, vice-president of the Brotherhood of Railroad Trainmen said that he was glad to join in a meeting to help develop a friendly feeling between the public and the railroads. Too often it has been the practice to cuss and damn the railroads when what is needed is the hearty co-operation of all classes of citizens as the transportation industry must continue to grow if prosperity is to continue. Neither the railroads, the employees or the general public can prosper if we do not have the co-operation of all classes. Continuing Mr. Doak said that we are living in an age of general disturbance in this country and in Europe with many "would-be saviors" to lead the railroads out of the wilderness. He characterized the worst thing in existence as a crooked politician, next to him is a crooked labor leader and third in the list is the crooked railroad officer. Mr. Doak made a plea for all joining to eliminate those classes and demanding that the whole truth and not half truths regarding railroad conditions be told.

There should be a better understanding by the public regarding the aims, aspirations and ultimate objects of the transportation problem. The American people themselves will ultimately solve the problem. The railroads and their employees should help convince them what is fair and right and that what are needed now as never before are honesty, industry and square dealing. In Mr. Doak's opinion, no government ownership system has or can be devised which will solve the transportation problem. He said that he believed that the men in his own organization were not in favor of government ownership. The patrons of the road were asked to have faith in the railroads and the employees to be loyal to the companies employing them.

### Other Speakers' Views

J. J. Halligan, attorney and farmer, said that he believed the time had come when both the railroads and the public are ready to concede that there must be fairness to both, and that it is now necessary to determine the terms. When disputes arise between railroads and their employees, Mr. Halligan said that the public will demand that the transportation systems of the country shall not be tied up.



**The Specials Arrived Early in the Morning**

A. G. Crane, president of Wyoming State University, said that the great problem before the country is the restoration of confidence in the railroads. He advocated leaving to private initiative and enterprise everything possible. The one thing that is necessary is that the public shall gain clearer understanding of the ideals of the railroads.

Other speakers were M. E. Crosby, mayor of North Platte, who delivered the address of welcome; A. L. Konold, general chairman of the B. of L. E. on the Union Pacific, who paid tribute to the value of automatic block signals in any safety first movement and who felt that government ownership would not solve the transportation problem. C. S. Howard, president of the Commonwealth Steel Company, felt that this meeting was one which would open up a new era for the railroads and the public. W. G. Edens, vice-president of the Central Trust Company, Chicago, called attention to the ill effects of unfounded statements being made by unprincipled persons and emphasized the fact that any movement not in harmony with the Constitution of the United States would not be tolerated by the American people for any length of time. D. P. Hogan, director of the Federal Land Bank, Lincoln, Nebr., explained to the farmers the operation of the bank and the way in which they can borrow money at low interest rates. Dean Burnett, of the State University of Nebraska Agricultural School, made a plea for the farmers to take advantage of the best agricultural methods known for increasing their crop yields. He also pointed out the results that could be obtained from scientific dairying and chicken raising. W. L. Richards, secretary of the B. of L. E. on the Union Pacific, acted as toastmaster at the banquet.

# A. R. A. Committee Reports to Coal Commission

## Finds Coal Shortages Due Mainly to Labor Difficulties· Too Many Mines

WASHINGTON, D. C.

THE CONFERENCE COMMITTEE appointed by the American Railway Association to co-operate with the United States Coal Commission has submitted its final report to that body, giving more complete data in support of the conclusions and recommendations of the preliminary report made on January 3. The report demonstrates that cases of extreme coal shortage can be traced to causes other than a lack of transportation and particularly that claims of excessive coal shortages have closely followed labor difficulties in either the railroad or coal industries. "The immediate transportation currently available may not have fully satisfied shippers' and consumers' alleged requirements in limited territories during sporadic periods of excessive demand," the committee says, "but it is believed that the needs of the consuming public were met in one way or another notwithstanding the extraordinary difficulties confronting the railroads."

In addition to the difficulties which have resulted from labor controversies attention is also called to the over-development of the coal industry which has resulted in a much greater increase in the demand upon the railways for cars than was justified by the production or consumption. In 1921 there were 8,038 mines, exclusive of wagon mines, in operation, an increase of 38 per cent over the number in 1910, while there was no increase in production. This means, the report says, that the railroads were called upon to divide equipment and other transportation facilities among 2,221 more mines than would have been necessary had the average production per mine been maintained on the 1910 basis. It is also shown that on the basis of cars ordered by mines in 1920 in excess of the actual requirements for coal the railroads would have been forced to invest not less than $2,000,000,000 in additional facilities to meet the demands of the bituminous coal industry in that year, as expressed by the mines' requisitions for coal cars, which exceeded the number required to handle the tonnage actually produced by 44 per cent.

J. E. Roberts, superintendent of transportation of the Delaware & Hudson, is chairman of the committee. In the main this final report follows the outline contained in the preliminary report. A fuller study of the topics therein suggested as meriting consideration has confirmed the conclusions there tentatively put forth. The committee has endeavored to place before the commission in greater detail than formerly not merely a dogmatic statement of conclusions, but the underlying facts, based on a careful study of statistics that support those conclusions. In this report have been discussed such important questions as growth of railway traffic, growth of coal and coke traffic and other traffic handled in open top cars, growth of railway facilities, relation of transportation growth to the movement of coal, economic effect and cost of equipping railroads with facilities necessary to move peak production of coal, conservation of fuel, transportation of coal by water, seasonal movements of traffic, extent and causes of so-called coal car shortages, effect of labor disturbances, mine ratings, demurrage, pooling coal, structure of coal rates, etc.

The conclusions of the report are:

There can be no doubt that the railroads of the United States are vitally interested in the work of your commission. It has been said that the principal problem of the coal industry is the problem of distribution. Without committing ourselves to the absolute correctness of this statement, we are sensible of the fact that the coal industry cannot be put upon a sound basis acceptable to the American people unless coal is transported with reasonable promptness and in the most efficient manner. It is the task of the railroads to furnish this transportation. This task has been rendered difficult by certain features characterizing the production of coal which your commission thoroughly understands and which all students of the problem are endeavoring to eliminate.

It is clear that if some method could be devised whereby the amount of coal which the country demands could be moved throughout the year in fairly constant quantities so that heavy seasonal movements would be avoided, the railroads of the country are sufficiently equipped to take care of the demands upon them in a satisfactory manner. Even if allowance is made for an increased demand for coal during the period of heaviest domestic consumption the railroads could meet the situation without serious cause for complaint. But the railroads do not feel that they are properly censurable for not being able to meet all the demands for transportation in years when strikes in the coal industry have stopped production for a considerable period making it necessary to crowd a year's business into a few months and that too at a time when there is the heaviest movement of other seasonal commodities.

Of course, the undertaking of the railroads to meet demands upon them must depend upon the ability of the railroads to increase their facilities as the business of the country increases. These facilities cannot be procured without the expenditure of new capital which must come from the investing public. It is clear that capital will not be attracted to railroad securities unless there is a reasonable assurance that the investment is safe. This assurance can come only through the adoption of a policy by the American people which will make it certain that the railroads for a time at least will be free from the menace of hostile legislation and will be permitted to work out their problems without fear of action which would be of a confiscatory nature.

These considerations lead us to suggest, as we have already suggested in our preliminary report, that there are two fundamental conditions which the public must establish before the problem of distributing coal will be solved. These are, first: fair treatment to the railroads under which they will be permitted to earn a fair return upon the value of their property fairly ascertained, and second: freedom from strikes, both in the coal and railroad industry, so that these two essential businesses may function without disturbing interruptions.

Following are some extracts from the report:

Along with the increasing coal traffic, there has been a marked growth in the traffic other than coal and coke which also is handled in open top cars. This traffic includes clay, gravel, sand, stone, ore, logs, poles, iron pipe, pig iron and some metal products. While actual figures are not available showing the total tonnage of commodities other than coal and coke loaded in open top cars, from the official figures of the Interstate Commerce Commission an approximation has been made, based on observation and long experience, which represents our best judgment of the amounts of such "other open top car" tonnage. These statistics show that from 1900 to 1911 the coal and coke revenue tonnage originating on all steam roads increased 83 per cent, while other open top car tonnage increased 97 per cent. Similarly from 1911 to 1920, coal and coke tonnage of Class I railroads increased 45 per cent and other open top car tonnage increased 64 per cent. The other open top car traffic formed a relatively greater proportion of the total traffic during years of general business activity such as 1906, 1910, 1913, 1916, 1917 and 1920, than in periods of depression. Along with the growth of traffic came an increase in the length of haul. In 1900 the average haul, all commodities, was 242.73 miles, while in 1921, the average haul was 304.61 miles, an increase of 25 per cent.

### Relation of Transportation Growth to Revenue Coal Movement

To indicate the relation of increases in railway facilities to the increases in the originating revenue rail shipments of bituminous coal and coke, a chart of such shipments on Class I roads during the period 1911 to 1921, is inserted. This chart indicates that the alleged coal shortage is not the direct result of transportation shortage but of other causes. In the years 1918 and 1920 the originating revenue tonnage of bituminous coal and coke averaged

413,698,919 tons, whereas in 1919 and 1921 the average was 311,-42,667 tons, a decrease of 24.7 per cent, although the available ransportation facilities in each of the two latter years were respectively greater than in the preceding years.

The growth in transportation factors related to the handling of total revenue ton-miles, the latter being the measure of railroad service required to protect the needs of the country, is clearly reflected in the following (charts). It can be seen that while the freight traffic requirements have been sporadic and very uncertain, yet the railway facilities have grown consistently, even though there were periods of considerable depression which prevented the railroads from securing a return from the surplus equipment which they were compelled to carry from time to time.

It is appreciated that there is a related factor in the number of cars awaiting repairs and that during the year 1921 the number of such cars was greater than the average in previous years. In the year 1922 this number was continued at a high level because of labor difficulties, but since the settlement of such difficulties cars are being restored to a more favorable condition. Rapid strides have been made in recent months in reducing the number of cars awaiting repairs, with indications pointing toward a continued improvement.

A careful study clearly indicates that the two periods of greatest coal car shortage have been preceded by and were the principal result of labor disturbances in the coal mining industry. These disturbances caused curtailed production resulting in general surplus of cars during the strike period gradually transforming itself into a shortage following the settlement of the difficulties, when the demand for cars was highly abnormal in an effort to recover from the effects of the suspension of mining due to such labor disputes. It is evident from this that freedom from labor disturbances in the coal mining industry would result in a more uniform production, enabling the railroads to better supply the mines with the required number of cars. No attempt has been made to deal with the large number of smaller strikes which occur from time to time, but only the two major disturbances in the past five years have been considered.

The average normal requirement for bituminous coal is approximately 10,000,000 tons per week, or 520,000,000 tons per annum. This includes railroad fuel. It will be noted that in three years the annual bituminous coal production exceeded the estimated annual requirements by from 32,000,000 to 59,000,000 tons, thereby meeting the demands of the country. A particularly striking condition, however, is noticeable regarding the number of mines from which the total production was gathered. There were 10,634 mines in 1917 with an average annual production per mine of 51,889 tons. In 1920, there were 14,766 mines, an increase of 4,132 mines or 38.9 per cent, but the average production per mine fell to 38,512 tons, a drop of 13,377 tons per mine, or 25.8 per cent. Due to this falling off in average production, the aggregate production for the year showed an increase of only 3.1 per cent, although the number of mines increased 38.9 per cent.

This indicates that on the basis of the average production per mine in 1917, the bituminous coal produced in 1920 could have been gathered from 10,959 mines instead of from 14,766. This shows a decided increase in the number of mines to which the railroads must furnish transportation without any appreciable increase in the total production. While it is not known what the investment per mine is, nevertheless it can be seen that there apparently is a surplus investment in the coal industry when compared with the tonnage produced in recent years.

As each mine requires a portion of the total transportation service accorded by the railways to the coal industry, it can clearly be seen that a more concentrated development in the coal industry will permit more concentrated railway transportation service. From the co-ordination of these elements would be secured the maximum production without a waste of capital and transportation, and the surplus investment in the coal and railway industries together with the creation of labor surplus, which result in part time employment, would be eliminated.

## Economic Effect and Cost to Equip Railroads to Move Peak Production of all Coal Mines

In the year 1920 the bituminous coal mines ordered 16,357,514 cars. Assuming an average loading of 50 tons per car, the aggregate equipment ordered would have transported 817,876,000 tons. The actual production of the mines was 568,667,000 tons. The tonnage for which cars were ordered was therefore in excess of the tonnage actually produced by 249,209,000 tons or by 44 per cent.

Assuming that the average carload of coal was 50 tons, and that the average round trip consumed seventeen days, it would have required in 1920 a total of 232,140 additional coal cars to handle the 249,209,000 tons of coal for which equipment was ordered in excess of evident requirement. At $1,700 per coal car, the total cost to the railways of purchasing these additional 232,140 coal cars would have been $395,000,000.

Applying the same method to ascertain the number of additional locomotives that would have been necessary to haul the excess coal tonnage, and assuming a generous loading per train of 1,600 tons of coal, it would have required 7,254 new locomotives. The cost to the railways of equipping themselves with these additional locomotives at $54,000 per locomotive would have been $392,000,000. Adding together the $395,000,000 for coal cars and the $392,000,000 for locomotives, the total increased investment in equipment alone, to handle the excess tonnage, would have been $787,000,000.

Additional facilities other than equipment would also have been required, doubtless to the amount of at least twice the value of the equipment. This would indicate that the railways in 1920 would have been forced to invest not less than $2,000,000,000 to handle the demands of the bituminous coal industry in that year, as expressed by the mines' requisitions for coal cars. The economic effect of providing railroad equipment to meet the peak demand of producers in the bituminous coal industry would be over-development in the railway industry.

1. Over-development in the bituminous coal industry has caused: (a) Surplus capital investment; (b) Surplus labor and part time employment; (c) Increased labor rates; (d) Increased cost of coal.

2. The over-development in the railroad industry, that would follow any attempt to meet the peak demands growing out of over-development in the bituminous coal industry, would cause: (a) Surplus railway investment; (b) Surplus railway labor and part time employment; (c) Increased railway wages; (d) Increased freight rates.

In other words, the irregular conditions in the bituminous coal industry, which have been largely responsible for the increased price of coal, would spread to the railway industry and would impose an unnecessary burden on the public in the form of increased freight rates to carry the excess surplus investment and labor costs.

## Over-Development in the Bituminous Coal Industry

While from 1905 to 1910 there was an increase in the production per mine (and this continued through 1913), there has been, since 1914, a continuous decrease in the production per mine. Had the 1910 tonnage production per mine been maintained, the 1921 tonnage could have been produced by 5,817 mines, instead of 8,038 mines. This comparison would be even more striking if 1921 were compared with 1913 instead of with 1910. This means that the railroads were called upon to divide equipment and other transportation facilities among 2,221 more mines in 1921 than would have been necessary had the average production per mine been maintained on the 1910 basis.

In 1905 the mines producing 50,000 tons or more numbered 1,831, or 36.2 per cent of the total. They produced 85.7 per cent of the total tonnage. In 1920, the mines producing 50,000 tons or more numbered 3,011, or 33.8 per cent of the total number, and produced 83.5 per cent of the total tonnage. In 1921, the mines producing 50,000 tons or more numbered 2,292, or 28.5 per cent of the total number, and produced 84.0 per cent of the total tonnage.

In 1905, 20.2 per cent of the mines produced 67.5 per cent of the tonnage, while in 1920, 19.5 per cent of the mines produced 67.4 per cent of the tonnage and in 1921, 16 per cent of the mines produced 66.9 per cent of the tonnage.

Expressed in another way, in 1905, 80 per cent of the gathering service was given to 32.5 per cent of the tonnage, and in 1921, 84 per cent of the gathering service was devoted to 33.1 per cent of the tonnage.

The number of mines producing more than 50,000 tons per year increased from 1905 to 1921 by 25 per cent, and the tonnage produced by such mines increased in the same period by 29 per cent. The number of mines producing less than 50,000 tons per year increased from 1905 to 1921 by 78 per cent and the tonnage produced at such mines increased by only 48 per cent.

50,000 tons per year represents approximately 4 cars per working day. Over 66 per cent of the mines working in 1920 produced less than this. In fact, the average production of this 66 per cent was 314 car loads in the year, or a little more than one car per day. 71.5 per cent of the mines working, in 1921 produced less than 50,000 tons each, the average being 232 cars per mine, or about one car per working day. The figures upon which these statements are based are taken from the reports of the U. S. Geological Survey. Wagon mines are not included and the figures and comparisons relate only to tipple mines served by sidetracks. In addition to the mines with sidetracks, the railroads were called upon to place cars on numerous public sidings to which coal was teamed or trucked from wagon mines. These numbered 5,845 in 1920, each with a production of less than 10,000 tons, and an average production of 800 tons, or 16 car loads per year.

The outstanding feature is the large increase in the number of mines contrasted with the relatively small increase in production. The reports of the U. S. Geological Survey show this increase

has taken place mainly through the opening of small mines of less than 10,000 tons production annually. The small mine, which is largely the product of recent years—the great number of such operations and the miscellaneous and varying quality of their output—has diluted the car supply and has been no small factor in the transportation shortage of recent years.

## Seasonal Movements of Traffic

The transportation load of the railroads as a whole is subject to wide variation during the seasons of each year. During 1922 the minimum revenue car loading for four weeks in any month was in January, when from the 1st to the 28th both inclusive, 2,808,872 cars were loaded, while the corresponding maximum loading was recorded in October when in the first four weeks 3,969,878 cars were loaded. The October load was 41.3 per cent greater than that of January. In January all demands for transportation were met and there was a large net car surplus, while in October there was reported the largest car shortage of which there is record.

The year 1920 is more representative than 1922 as to the stability of business conditions throughout the year. We find, in this year of continued business activity, that October showed an increased peak load of 37.6 per cent over April. While the car loading during the second week of April was adversely affected by the "outlaw" switchmen's strike, the total for the four weeks was very nearly the same as for the four weeks of February. This indicates that the ratio between maximum and minimum load during any fairly representative year does not materially change.

This seasonal variation is independent of any change as between car surplus and car shortage, also of any change in industrial conditions, whether boom times or periods of depression. It is dependent upon and is caused by: 1. Nature's provision for the harvesting of agricultural products; 2. Weather conditions in the more northerly latitudes; 3. Practice of the consumer in purchasing according to his ability or inclination to meet his needs.

There is no possible method by which the seasonal features of freight traffic movement can be eliminated. But in considering any solution of the operating problems caused incidental to these peak loads of transportation, no plan should be contemplated in which the problem of handling the peak load is relegated to the railroads to work out alone as best they may, by making such limited improvements in the spread of traffic as are possible here and there.

## "Coal Car Shortages," How They Vary and Causes That Produce Them

"Coal Car Shortage," while a term generally used, is commonly a misnomer; "Transportation Shortage" would be more exact or more properly descriptive. From the viewpoint of the mine management a "car shortage" exists when cars are not placed on mine tracks in sufficient quantity to fill car orders. From the viewpoint of the railroad management the situation may rather be considered a "Transportation Shortage," for at such a time there may exist no "car shortage" on the railroad as a whole. That is, even though all car orders are not filled there may be in the road's possession as many coal cars in the aggregate as in previous periods when the mines it served loaded a greater amount of coal and the needs of such mines for cars were more adequately or fully met.

When labor disturbances cause abnormal demands for coal to be delivered in certain sections of the country within a certain period, the coal moves to meet these demands via routes and gateways in quantities far above the normal, or average, movement through such channels and also via unusual routes. Because of this abnormal coal movement, yard tracks, main tracks, terminals, lake and tidewater piers and various other facilities become overtaxed or congested, with a consequent slower movement and longer turn-around of cars. This results in what the mine management terms a "car shortage." The situation may be visualized by comparison with a busy theatre district at performance time, when abnormal traffic is moving toward one general destination.

A study shows:

1. Long consecutive periods during which cars furnished were not equal to cars ordered, but at the same time cars furnished were far in excess of cars loaded.
2. Long periods during which cars furnished were equal to or exceeded cars ordered, and at the same time cars ordered and cars furnished were even more greatly in excess of cars loaded.
3. Much shorter and more infrequent periods during which cars furnished were considerably less than cars ordered but at the same time cars loaded much more closely approached cars furnished.

Considering the subject of coal car supply on the basis of calendar years and with relation to the needs for coal, it has been the rule, with rare exceptions, that the close of the year has found the demand for coal well satisfied. It is, however, true that during certain periods of some years the demands for coal may have been far beyond the then current production, and also beyond the average rate of production for the year. There are various causes that produce such situations which must be carefully analyzed. In this process it becomes vitally necessary to consider the bituminous coal needs of the country by periods, and the causes preventing such needs being met as demand rises and falls from week to week, or month to month, even though the year's demand as a whole may have been met.

The review of conditions from 1917 to 1922 inclusive, shows that during 1917 and 1918 when there were no generally effective strikes, the production of coal was heavy, with the demand for cars generally well met. This condition continued through seven months of 1919 to August, when the railroads were affected by the "outlaw" shopmen's strike which caused depletion in the coal car supply. By the middle of September the threatened miners' strike (called for November 1) caused an abnormal demand for coal cars. When the strike materialized the result was an immediate surplus and storage of coal cars on railroads generally. The strike of mine labor was settled by mid-December and mining was resumed. This caused a sudden and abnormal demand for cars, resulting in a shortage which continued to a greater or less extent all winter. In April, 1920, this condition was aggravated by the "outlaw" switchmen's strike.

The abnormal conditions brought about by the "outlaw" shopmen's strike and the miners' strike in the last half of 1919 and the "outlaw" switchmen's strike in the spring of 1920 cleared up so that the year of 1920 closed with practically a full car supply. The year 1921 was a period of surplus and cars were in storage all year. This condition continued until the shopmen's strike beginning July, 1922, since which time there has been a shortage of coal cars at the mines extending into the current year. Thus it is evident that general coal car shortage periods are closely related to, and are the result of, labor troubles in the coal and transportation industries.

## System of Mine Ratings

So far in this discussion of "coal car shortages" there have principally been presented causes which slow up the actual movement and use of motive power and cars. There is, however, a factor which may be termed artificial, that has entered into the complaints of "coal car shortages" which have been recurring for a long time. In terming it "artificial," however, there is no intent to convey the thought that it is not a factor that warrants most serious consideration. This factor is the extent to which the rating of coal mines for car supply has been inflated beyond the mines' potential capacity to produce and ship coal; or the capacity of the country and the consuming public to absorb it. Under the system of rating mines which has been in effect for several years past practices have crept in which have inflated ratings to a point where serious shortage of coal cars has been claimed coincident with weekly production well above normal averages. The evil effect of this inflation is that it often impresses the public with the idea that there is not only a serious shortage of coal cars but a serious shortage of coal as well, when in a majority of instances the reverse is true.

Of such gravity did this situation become that during last summer the Interstate Commerce Commission inaugurated a hearing which has very exhaustively considered the entire subject of mine ratings. The findings of this inquiry have not yet been published. In January, 1923, however, at the suggestion of the Interstate Commerce Commission, representatives of the bituminous coal operators and of the bituminous coal carrying railroads met at Washington to prepare and submit to the Interstate Commerce Commission a joint recommendation as to rules for rating of mines which could be uniformly applied in the different sections of the country and which would reduce inflation of mine ratings. After an earnest effort the joint conference of coal operators and railroad representatives unanimously agreed to report to the Interstate Commerce Commission the opinion that while it was not possible to formulate a set of rules for mine ratings which would satisfactorily fit all the conditions prevailing in the various and widely separated coal fields of the country, it was possible to establish certain basic principles that should be generally followed.

The plan suggested the employment by each railway (or group of railways) of a mine rating and inspection bureau composed of skilled men, exclusively in the service of the railways, to determine each mine's rating after obtaining such information from the mine or making such investigation and inspection as might be required to secure the requisite and accurate data needed to establish just and reasonable ratings. This bureau would consider as to each mine,

1, Physical conditions; 2, past performance; 3, labor supply; 4, other factors that may affect the production and shipment of coal.

It is expected the rules formulated under this plan will materially reduce inflated mine ratings, thereby so reducing the orders

for cars that the percentage of cars furnished to cars ordered will not, when coming to the attention of the public, convey the false impression of a serious shortage of cars, and consequent immediate or prospective shortage of coal.

In this connection it would be well to note the following figures taken from an exhibit filed on behalf of the carriers in the Assigned Car and Mine Rating Case before the Interstate Commerce Commission on December 13, 1922.

| Week ended | Cars ordered | Cars furnished | Per cent of cars furnished | Cars loaded | Total bituminous coal production entire U. S. |
|---|---|---|---|---|---|
| Nov. 24, 1917... | 299,298 | 228,416 | 76 | 202,618 | 11,187,000 |
| Nov. 25, 1922... | 429,809 | 229,036 | 53 | 202,305 | 11,038,000 |

It will be noted that comparing these weeks of good (and above normal) production, five years apart, there is but little difference in the number of cars furnished, the number loaded or the total tonnage of coal produced; but there is a tremendous increase in the number of cars which the railways were called upon to furnish in the latter year. Part of this increase in cars ordered is chargeable to the increase in the number of mines, but a very large portion is also due to the great inflation of mine ratings.

## Dilution of Transportation

No small part of the coal transportation difficulty has been caused by the falling off in the average production per mine and the great increase in the number of mines which the railways must serve. It is readily seen that a greatly added transportation burden has been thrown upon the railways by the increased number of mines operated that must be served without even approaching a commensurate increase in coal tonnage and rail revenue. Such dilution of transportation of necessity diminishes the efficient and economical use of the equipment which the railways have provided to handle the coal traffic of the country.

Viewing this situation from a different angle, and citing a more recent example, during the week ended July 13, 1918 (the war year), which was the week of peak output (13,286,000 tons of coal), the total number of cars ordered of the railroads was 299,173. There were furnished 286,393, or 96 per cent. For the week ended December 23, 1922, 441,903 coal cars were ordered of the railways. On the basis of 50 tons per car, this meant that the mines were ordering transportation for a weekly production of more than 22,000,000 net tons, which amount is more than twice the average weekly requirements, and which is a production record that has never been approached in the history of the country.

## Irregularity of Seasonal Demand for Coal

The two most conspicuous seasonal demands for coal are for household use and for trans-shipment via the Great Lakes. Irregularity in the normal seasonal purchases of coal by householders is often due to market conditions, which in turn may be abnormal on account of labor disturbances in the coal and transportation industries.

In years of abnormal coal market, mine labor or industrial furnace conditions, it occurs that shippers and receivers of lake coal, with questionable wisdom, refrain at the beginning of a lake season from purchasing and trans-shipping the coal quotas that should move each week or month, thereby shortening the season and requiring the concentration and the overburdening of railroad facilities during the abbreviated season.

During the early part of the lake shipping season of 1922, when the non-union coal mines only were loading coal in any quantity, there was a tendency to withhold the purchase and arrangement for the supply of coal for the northwest, although this did not assume extraordinary proportions. There were, for example, in the months of April and May, 1922, as high as 2,800 cars of coal held daily unconsigned or awaiting billing on three of the railroads which served the non-union fields. In general, the lack of production due to the miners' strike continuing from April 1 to September 1, 1922, forced into the last four months of the year a movement of coal for lake trans-shipment in excess of any prior relative movement in these same months. This created a substantial burden upon the eastern coal carriers, utilizing facilities which at that time were required for other commodities moving in normal volume.

The movement of grain and ore to Lake Erie ports is in some seasons quite the controlling factor in the regularity of lake coal movement from these ports. Ice conditions and vessel rates are other factors which must not be overlooked.

## River Transportation

In recent years, from eighteen to thirty million tons of the total annual production of bituminous coal has been afforded river transportation. More than half of this total is confined to the Monongahela river, with a lesser amount on the Ohio and still lesser quantities on the Allegheny and the Kanawha rivers. There is a movement of about 200,000 tons per annum on the rivers in Alabama. Most of this river-borne coal can move practically every day throughout the year, except that there is a period of approximately two months on the Allegheny and Monongahela rivers when conditions render water transportation impracticable. During the period this condition exists, it serves to concentrate upon the railroads in the districts affected an additional load at that period of the year when coal transportation demands are usually at their maximum.

Elsewhere is shown the effects of the seasonal demand for coal, the ratio which exists between the maximum and the minimum transportation load required of the roads in handling this commodity, and the commercial and other reasons which now preclude a more even distribution of the load throughout the year. The result of this excess demand for equipment during certain seasons requires the railroads to provide and maintain an increased number of cars, motive power, and other facilities, thus increasing capital expense beyond that necessary to handle the traffic; provided the load could be spread more evenly throughout the year.

## General Increase in Efficiency of Railroad Freight Transportation

Under the caption "Growth of Railway Facilities," there has been discussed at some length the increase in facilities which has been provided by the railways to take care of the traffic of the country, and the increase in efficiency which has been brought about by the employment of larger capacity freight-carrying units and heavier capacity motive power. The result in increased efficiency of transportation is well illustrated by the following brief comparative statement of ton miles and train miles in 1914 as compared with recent periods:

| Year ending | Revenue ton miles for Class I roads | Freight train miles for Class I roads |
|---|---|---|
| June 30, 1914..... | 284,924,749,718 | 613,272,798 |
| Dec. 31, 1921..... | 306,736,765,622 | 530,706,093 |
| Dec. 31, 1922..... | 339,730,198,000 | 554,780,000 |

It will be seen that in 1922 the Class I railroads handled 19.2 per cent *more* revenue ton miles with 9.5 per cent *less* freight train miles than in 1914. In 1921, the performance was 7.7 per cent *more* revenue ton miles than in 1914, with 13.5 per cent *less* train miles.

In addition to the increase in coal car ownership and average and aggregate coal car capacities, the bituminous coal carrying roads have endeavored, during periods of box car surplus and coal car shortage, to devote all possible box car surplus to coal carrying purposes. The use of box cars, however, for the transportation of bituminous coal, is limited by the inadequacy, at points of origin and destination, of machinery or appliances for loading and unloading. Where the emergency use of box cars for coal loading has been possible the railways have endeavored to augment the coal car supply by such use.

One fact that must be taken into consideration in this connection, however, is that very often when there is a so-called "coal car shortage" there is a coincident box car shortage, inasmuch as conditions or causes underlying the so-called "coal car shortage" in like manner affect or slow up the movement of box cars and thus deplete the supply of such cars which may daily be made available for all purposes.

There is an opportunity for greater comparative use of box cars for anthracite coal loading than for bituminous coal loading, particularly where the destination of the shipments is into the Great Lakes region and beyond. It is also true that anthracite mines are more generally equipped for box car loading than are bituminous mines.

It is not infrequently the case during periods of car shortage, that there are a considerable number of cars of coal under load awaiting billing—carried on the daily records of the railroads as "unconsigned." During the three months of October, November and December, 1922, when demands for coal cars were at their peak, there was carried an average daily number of 2,397 cars of bituminous and 624 of anthracite coal "unconsigned." In January and February, 1923, this number increased to 2,691 cars of bituminous and 646 cars of anthracite coal, while in March the figures were 6,025 cars and 629 cars respectively.

## Increased Storage of Coal By Railways

Due to the wide spread in the demand for bituminous coal on account of seasonal requirements, as well as the fluctuating annual requirements, there are times when the demand varies 35 to 40 per cent, resulting in a similar variation in production. It is alleged that this fluctuating demand is one of the prime causes for the over-development of the coal industry.

The general impression exists that in order to stabilize the industry by more uniformly distributing the production throughout the year, the users of coal should adopt a more liberal storage program during the summer months to protect against the ab-

normal demand for coal and transportation during the winter months. The United States Geological Survey estimates indicate that the probable amount of coal in storage for all uses at the beginning of the winter season is normally about 40,000,000 tons. It is also estimated by the Geological Survey that 60,000,000 tons are required to equalize production and transportation. The railroads use over one-fourth of the bituminous coal produced and generally store, according to the varying conditions obtaining on their lines and based on their experience, an amount found to be generally practicable, economical and sufficient to overcome possible transportation interferences, and also to equalize excess winter consumption. For example, the New England and the northwestern roads, and even coal producing roads at points remote from their mines, have enlarged their storage programs to meet the varying conditions. On a number of coal originating railroads considerable coal is furnished direct from mine to engine tenders, the handling of which does not affect car supply or transportation. The railroads do not deny the reasonableness of economical storage.

In considering the question of increased storage of coal by railroads, the following factors should be taken into consideration:

### Advantages

1. The opportunity of securing cheaper coal during a buyer's market as against higher prices during a seller's market.
2. Equalization of the demand for transportation.
3. Minimizing the necessity for confiscation of commercial coal.
4. Stabilization of the production in the coal industry by equalizing the excess winter demand.
5. Protection against traffic delays caused by severe weather conditions, labor disturbances, etc.

### Disadvantages

1. Excessive cost.
2. Degradation.
3. Loss from spontaneous combustion.
4. Deterioration.
5. Difficulty in forecasting future requirements.

(The report includes a lengthy analysis of the advantages and disadvantages).

### Seasonal Coal Rates

Seasonal coal rates have been advocated by various interests for several years in the belief that they would stimulate the purchase and shipment of coal during the summer months—the months of greatest transportation efficiency. Further, it is claimed that such rates would result in a more evenly balanced traffic movement by spreading out the car supply throughout the year, equalizing the monthly production of coal, and giving regular employment to mine labor, thereby reducing the unit cost of coal production which would be reflected in the price paid by the consumer.

In the bituminous coal fields of Maryland, Pennsylvania, West Virginia, Ohio and eastern Kentucky, which furnish over 60 per cent of the country's bituminous production, there is normally but a slight seasonal variation in the volume of the tonnage handled. During the year 1921, the last full year undisturbed by labor difficulties in either mining or transportation activities, the total production of these fields was distributed as follows:

| | |
|---|---|
| 1st quarter | 24.6 per cent |
| 2nd quarter | 25.3 per cent |
| 3rd quarter | 24.7 per cent |
| 4th quarter | 25.4 per cent |

In the middle west, which includes the large production of Illinois, Indiana and western Kentucky, the movement is normally heavier in the winter than in the summer months. During 1921 this movement was distributed as follows:

| | |
|---|---|
| 1st quarter | 26.8 per cent |
| 2nd quarter | 20.0 per cent |
| 3rd quarter | 24.2 per cent |
| 4th quarter | 29.0 per cent |

In the southern territory, which includes the Alabama, Tennessee and Virginia fields, and the coal moving from Kentucky to the South, there is normally a very slight seasonal variation. In the year 1921 the tonnage of those fields was distributed as follows:

| | |
|---|---|
| 1st quarter | 25.0 per cent |
| 2nd quarter | 23.6 per cent |
| 3rd quarter | 25.3 per cent |
| 4th quarter | 26.1 per cent |

A chart shows graphically the seasonal variation in originating bituminous coal tonnage by quarters, during the calendar year 1921, for the eastern, western, and southern territories, as referred to in the foregoing. The balanced coal traffic in the eastern territory may be attributed to the seasonal movement of approximately 25,000,000 tons to the lower Lake Erie ports for vessel movement to the northwest, also the preponderance of movement to tidewater during the summer months. The seasonal variation in western territory is attributed to the fact that a larger percentage of the total production is used by domestic consumers than in the eastern section, which has a greater industrial development and available anthracite. The balanced coal traffic in southern territory is attributed to the comparatively small domestic demand and the fairly constant demand by industries and railroads.

It is, therefore, obvious that seasonal coal rates would be of no advantage in either the east or the south. To adjust the rates from Illinois, Indiana and western Kentucky to stimulate the movement of coal to the northwest during the summer months would practically drive the eastern coals out of that market, because the eastern coals shipped via the Great Lakes do not move in quantity to the Lower Lake Erie ports until May of each year, and from the northwestern docks until the fall and winter months. A summer adjustment on the eastern coals to meet a like adjustment on the Illinois, Indiana and western Kentucky coals would be of no avail, and the actual result would be to disturb a well balanced traffic, during the summer, of coal to Lake Erie ports and iron ore from these ports to interior furnaces, as well as the operating and car efficiency now obtaining in the northwest, where the coal moves in quantity from the docks during the last half of the year in cars that have brought the western grain to the docks.

As to the far western coals produced in Montana, Wyoming and northern Colorado, the characteristics of these coals are such that they cannot stand storage. Therefore seasonal adjustment of freight rates would be of no assistance in correcting the seasonal operation of mines in that territory.

It is our judgment that no improvement of the situation would follow from the inauguration of an adjustment of rates intended to induce a change in the movement from one season to another.

# Car Loading Passes Million Mark

WASHINGTON, D. C.

THE remarkable showing which the railroads have been making ever since the first of the year as to volume of freight traffic handled became even more striking during the week of May 26, when the number of cars loaded with revenue freight passed the million mark. In only seven previous weeks since the figures were compiled have the roads loaded more than a million cars in a week at any season and the total for the week of May 26, 1,014,029 cars, has been exceeded in only two previous weeks, and then during the fall season when traffic is usually at its peak. During the week of October 14, 1920, the loading amounted to 1,018,539 cars and in the week of October 28, 1922, the total was 1,014,480 cars. The loading for the week of May 26, was also 201,152 cars greater than that during the corresponding week of last year and 218,694 cars greater than that for the corresponding week of 1921.

Ever since the first of the year car loading has been breaking records for the season, while the car shortage has been steadily reduced and the congestion which existed at certain points following the shop strike and during the winter has been eliminated. It is interesting to note also that the loading of over a million cars in a week was accomplished with practically no car shortage. During the week ended May 22 the reported shortage was exceeded for the first time since September 1, 1922, by the surpluses reported from other sections. The total shortage was 20,585, while the surpluses aggregated 22,700. The record loading was also accomplished in the face of orders issued by the Car Service Division of the American Railway Association for the relocation of cars from eastern to western lines under which approximately 25,000 cars of western ownership have been delivered by the eastern to the western lines through the Chicago gateway alone since April 16.

The loading of a million cars in a week was attained this year three months earlier in the year than ever before. In 1918, 1919 and 1921 that figure was never reached. In 1920 the million car mark was passed during the week of August 26, in 1922 not until the week of October 21.

Increases as compared with the corresponding week of

last year were shown in all classes of commodities except grain and grain products and l.c.l. merchandise. The largest increases were in coal, of which 192,092 cars were loaded; ore, which showed an increase of 46,629 cars and miscellaneous freight, which showed an increase of 44,503 cars.

The total loading since January 1 this year has been 19,035,772 cars, as compared with 15,866,677 cars in the corresponding period of last year and 14,877,881 cars in the corresponding period of 1921.

The railroads of the United States from May 1 to May 15 this year installed 5,633 new cars and 308 new locomotives, according to reports filed with the Car Service Division of the American Railway Association. This brought the total number of new freight cars installed since January 1 to 55,784, while a total of 1,536 new locomotives have been placed in service during the same period.

New freight cars on order on May 15 totaled 113,619. Of that number, box cars totaled 48,569; refrigerator cars, 14,228; coal cars, 45,742, and stock cars, 1,925. During the first 15 days in May, the carriers placed orders calling for the delivery of 147 new locomotives which brought the total number on order on May 15 to 2,103.

The railroads on May 15 not only had more serviceable locomotives than ever before since the Car Service Division began the compilation of its locomotive records in August, 1920, but there were also fewer locomotives in need of repair than ever before during the same period. Serviceable locomotives on May 15 totaled 50,587, an increase of 328 over the total number on May 1 this year, which had previously marked the peak.

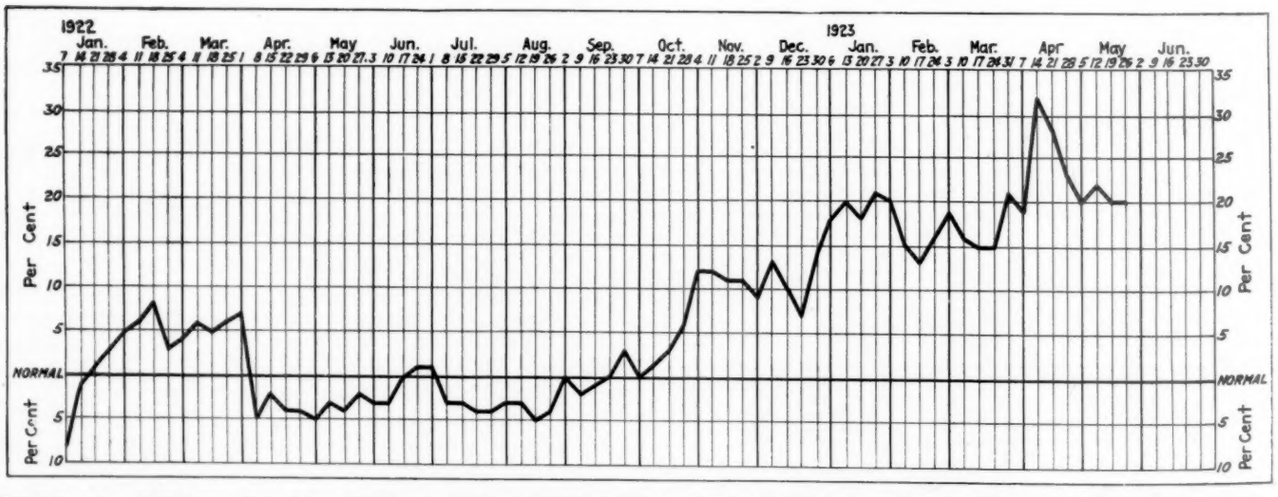
Locomotives in need of repair on May 15 totaled 13,495 or 21 per cent of the number on line. Compared with the number on May 1, this was a decrease of 636. Locomotives awaiting heavy repair totaled 12,183 or 19 per cent of the number on line, compared with 12,473 or 19.4 per cent on May 1. Reports also showed 1,312, or 2 per cent of the total number on line, to be in need of light repair on May 15. This was a decrease of 346 since May 1.

During the semi-monthly period from May 1 to May 15, a total of 16,904 locomotives were repaired and turned out of the shops. This was an increase of 485 over the number repaired during the last half of April. On May 15, there were 1,376 serviceable locomotives in storage and available for use when traffic conditions warrant. This was an increase of 50 locomotives over the number in storage on May 1.

## REVENUE FREIGHT LOADED

SUMMARY—ALL DISTRICTS, COMPARISON OF TOTALS THIS YEAR, LAST YEAR, TWO YEARS AGO. WEEK ENDED SATURDAY, MAY 26, 1923

| Districts | Year | Grain and grain products | Live stock | Coal | Coke | Forest products | Ore | Mdse. L.C.L. | Miscellaneous | Total revenue freight loaded 1923 | Corresponding period 1922 | Corresponding period 1921 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Eastern | 1923 | 8,032 | 3,012 | 57,312 | 3,920 | 6,629 | 8,415 | 67,814 | 98,400 | 253,534 | ..... | ..... |
| | 1922 | 9,898 | 2,882 | 7,829 | 1,325 | 5,926 | 3,028 | 68,715 | 87,263 | ..... | 186,866 | 194,000 |
| Allegheny | 1923 | 2,428 | 2,601 | 61,032 | 7,667 | 3,629 | 14,973 | 49,503 | 89,057 | 230,890 | ..... | ..... |
| | 1922 | 2,716 | 2,581 | 15,670 | 4,856 | 2,795 | 2,739 | 52,533 | 71,073 | ..... | 154,963 | 168,449 |
| Pocahontas | 1923 | 215 | 128 | 27,934 | 480 | 2,111 | 394 | 6,597 | 4,973 | 42,832 | ..... | ..... |
| | 1922 | 224 | 140 | 30,482 | 210 | 1,539 | 41 | 6,223 | 4,105 | ..... | 42,964 | 34,026 |
| Southern | 1923 | 3,588 | 2,163 | 22,838 | 1,317 | 24,371 | 1,772 | 38,617 | 42,804 | 137,470 | ..... | ..... |
| | 1922 | 3,356 | 2,186 | 24,188 | 673 | 19,974 | 967 | 36,960 | 41,013 | ..... | 129,317 | 114,717 |
| Northwestern | 1923 | 9,318 | 9,361 | 6,189 | 1,056 | 21,681 | 40,442 | 31,146 | 38,639 | 157,832 | ..... | ..... |
| | 1922 | 12,920 | 8,050 | 6,555 | 1,425 | 18,662 | 14,100 | 30,495 | 33,014 | ..... | 125,221 | 113,024 |
| Central Western | 1923 | 8,400 | 11,725 | 12,880 | 413 | 12,634 | 3,601 | 35,488 | 50,041 | 135,182 | ..... | ..... |
| | 1922 | 12,350 | 10,679 | 3,988 | 222 | 7,261 | 2,119 | 35,116 | 43,759 | ..... | 115,494 | 111,270 |
| Southwestern | 1923 | 3,541 | 2,787 | 3,907 | 147 | 8,284 | 522 | 14,669 | 22,432 | 56,289 | ..... | ..... |
| | 1922 | 3,942 | 2,353 | 2,018 | 128 | 7,238 | 496 | 14,261 | 21,616 | ..... | 52,052 | 59,849 |
| Total West. Districts. | 1923 | 21,259 | 23,873 | 22,976 | 1,616 | 42,599 | 44,565 | 81,303 | 111,112 | 349,303 | ..... | ..... |
| | 1922 | 29,212 | 21,082 | 12,561 | 1,775 | 33,161 | 16,715 | 79,872 | 98,389 | ..... | 292,767 | 284,143 |
| Total, all roads | 1923 | 35,522 | 31,777 | 192,092 | 15,000 | 79,339 | 70,119 | 243,834 | 346,346 | 1,014,029 | ..... | ..... |
| | 1922 | 45,406 | 28,871 | 90,730 | 8,839 | 63,395 | 23,490 | 244,303 | 301,843 | ..... | 806,877 | ..... |
| | 1921 | 46,601 | 28,077 | 165,611 | 5,531 | 51,728 | 28,424 | 218,581 | 250,782 | ..... | ..... | 795,335 |
| Increase compared | 1922 | ..... | 2,906 | 101,362 | 6,161 | 15,944 | 46,629 | ..... | 44,503 | 207,152 | ..... | ..... |
| Decrease compared | 1922 | 9,884 | ..... | ..... | ..... | ..... | ..... | 469 | ..... | ..... | ..... | ..... |
| Increase compared | 1921 | ..... | 3,700 | 26,481 | 9,469 | 27,611 | 41,695 | 25,253 | 95,564 | 218,694 | ..... | ..... |
| Decrease compared | 1921 | 11,079 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| May 26 | 1923 | 35,522 | 31,777 | 192,092 | 15,000 | 79,339 | 70,119 | 243,834 | 346,346 | 1,014,029 | 806,877 | 795,335 |
| May 19 | 1923 | 33,806 | 31,274 | 181,599 | 15,470 | 77,653 | 67,057 | 244,325 | 340,613 | 991,797 | 780,953 | 770,991 |
| May 12 | 1923 | 31,997 | 29,689 | 175,158 | 15,302 | 74,424 | 59,619 | 243,544 | 344,798 | 974,531 | 767,094 | 751,186 |
| May 5 | 1923 | 34,097 | 33,508 | 175,866 | 15,100 | 72,154 | 37,943 | 240,845 | 351,516 | 961,029 | 747,200 | 721,722 |
| April 28 | 1923 | 36,922 | 31,703 | 180,127 | 15,729 | 77,255 | 24,135 | 241,388 | 356,435 | 963,694 | 751,111 | 721,084 |




**Freight Car Loadings Per Cent of Normal—Per Cent for Each Week Figured on Basis of Average for Corresponding Weeks, 1918 to 1922, Inclusive**

# Loss and Damage Payments Reduced 50 Per Cent

## Freight Claim Division Hears of Accomplishment in 1922 —Discusses Rough Handling

FEATURES of the fourth—and last—day of the annual meeting of the Freight Claim Division of the American Railway Association, which closed in Montreal on June 1, included: a report of the division's committee on freight claim prevention and addresses by J. H. Butler, manager of the Loss and Damage Department of the American Railway Express Company, and Col. B. W. Dunn, chief engineer, and Edward Dahill, Jr., engineer, of the Freight Container Bureau.

Mr. Butler's address was on prevention of loss and damage to express. He called attention to the new contract which the railways have with the express company which provides for a payment of all the express company's expenses, including loss and damage, before the railroads receive any payment. Consequently he urged that it was to the interest of the railroads to assist the express company in every way possible in reducing loss and damage. He reported a reduction of 71 per cent in the loss of entire package in 1922 over the previous year, and a reduction of 61 per cent in total loss and damage. He bespoke the assistance of railway officers in checking up the performance of joint railway and express agents at small stations and urged the co-operation of conductors with express messengers in handling express business at way stations to save delays to trains and to insure the handling of all express. He said that train dispatchers should be told that 85 per cent of the gross revenue of car load express goes directly to the railroad company; he felt that, if this fact were known, greater care would be exercised in giving these cars prompt and expeditious movement. He also called attention to the loss sustained by the express company because of the railway equipment not properly designed to handle the business.

Col. Dunn spoke of the work of the Freight Container Bureau in making engineering studies of the best containers for standard commodities. When the best type of container is agreed upon, the bureau issues a circular describing the container which it sends to shippers of that commodity, urging its adoption. The bureau's plan is to secure voluntary adoption of a container by the majority of shippers and later with the help of these shippers to endeavor to secure legislation making its use mandatory. Col. Dunn dwelt upon the great savings made possible by a highly specialized bureau looking after a particularly important phase of waste and loss. He spoke of the annual loss of $500,000 and 50 lives sustained by the railroads in handling explosives 16 years ago. In 1921, largely because of the work of the Bureau of Explosives, only one man was injured on all of the railways in handling them and the damage to property was but $75. He suggested the advisability of setting up a special bureau to look after the damage to equipment and load arising from rough handling.

Mr. Dahill told of the statistical investigations made by the Freight Container Bureau into the subject of containers, the percentage of each type in use and the percentage of each type which had to be coopered in transit by railway forces. He mentioned the great increase in the use of paper cartons and how by their use shippers were saving money in freight bills but were collecting greater sums from the railways in damage claims because of the fragility of these containers. He mentioned also the high percentage of second hand containers of various kinds which had to be coopered in transit.

# Report of Committee on Freight Claim Prevention

Freight claims paid and charged to the loss and damage account for the year ended December 31, 1922, amounted to $48,085,000, as compared with $96,730,000 for the year ended December 31, 1921—a reduction of $48,645,000, or 50.3 per cent, as reported by 226 carriers representing 95 per cent of mileage in the United States and 13 per cent of Canadian mileage. The ratio of freight claim payments to gross freight revenue of Class I carriers in 1922 was approximately 1.12 per cent, as compared with an average ratio of 2.42 per cent for the preceding four years.

The number of claims presented decreased 10.7 per cent, from 2,632,609 in 1921 to 2,351,412 in 1922. The monthly average number of claims on hand unadjusted was reduced 29.5 per cent, from 344,074 to 242,409. The freight claim account of 1922 was increased by $3,427,224, caused by a reduction in the suspense account from $8,159,494 to $4,732,270 during the year.

Comparatively few changes in the plan of campaign as outlined in previous reports have been found necessary or desirable. Adhering to the principles of education and supervision as being the prime factors for securing desired results in the fields of its endeavor, your committee has continued its bulletin service, through which source is being continually pointed out to operating, transportation, traffic and other representatives the causes for loss and damage, as reflected in statistical and research reports. The regular bulletin service has been augmented by a series of illustrated circulars, all being in the nature of suggestions as to what is causing loss and damage, with appropriate thoughts as to how such can be corrected or minimized.

As pointed out in previous report, your committee's initial activities were devoted largely to:

(a) The encouragement of freight claim prevention organizations on the individual lines where none existed, and the stimulations of activities on the part of lines already organized;

(b) The co-ordination of interline activities in connection with freight moving over more than one line.

Your committee feels encouraged to report that practically all lines are now organized in one form or another and are giving full co-operation to the national campaign. Co-ordination of the interline activities has been a slow process of development, due to the varying conditions in the several territories and, in many cases, varying opinions of supervising officers in those territories as to how certain problems can best be handled.

In this undertaking your committee and its special representatives have worked in close co-operation with the territorial freight claim conferences.

To enable the committee to secure a better understanding of the problems peculiar to the various territories and their relationship to the work as a whole, it was thought best to so arrange the committee meetings as to afford an opportunity for meeting with the various district claim conferences, and

in this manner it is felt that mutual benefits will accrue to both the conferences and the committee.

The first meeting of this kind was held at El Paso, Texas, in February, 1923, with the Southwestern Claim Conference; the second at San Francisco, Calif., in March, with the Pacific Coast Claim Conference; and the third at Chattanooga, Tenn., in April, with the Southeastern Claim Conference. In each instance joint public meetings were held with the shippers and receivers of freight. It is perhaps too early as yet to estimate the true value of this plan but, from surface indications, it is working out satisfactorily and will be continued during the coming year.

### Loss of Entire Package

Realizing that the generalities of publicity as reflected in the bulletins and other service would not accomplish full results, your committee, through its special representatives, has inaugurated the plan of specializing on certain prominent causes and commodities. The need for such specialization was fully reflected in the results obtained as outcome of the attention given to the item "Loss of Entire Packages."

From a careful analysis of our claim statistics showing payments by causes and commodities, it will be noticed that the most impressive accomplishment to be found is the great reduction in claims for "unlocated loss of entire packages." This item of expense, which constituted approximately 15.6 per cent of our total payments in 1920 and 13.6 per cent in 1921, was brought down to 10.5 per cent of the whole in 1922. In round figures, these claims were reduced from $13,171,000 in 1921 to $5,026,000 in 1922, a decrease of $8,145,000, or 61.8 per cent.

### Matching of "Over" and "Short" Freight

This committee is pleased to report that practically all lines have put into effect the principles embodied in its Circular No. FCD-105 of February 10, 1922, and that the district Claim Conferences are making progress in the establishment of supervision over local and common points to safeguard to the greatest extent the matching of "over" with "short" freight, the cross-referencing of astray and revenue billing, and to prevent the delivery of "over" or "astray" freight without securing the proper proof of ownership.

### Rough Handling

Statistics continue to reflect rough handling as the most serious and at the same time perplexing problem in the entire list of causes for loss and damage. Being a matter entirely within the bounds of operating circles to study and correct, it has been quite difficult to have the operating officials agree upon a uniform program for effective solution of the problem. Reports from the various territories indicate that practically all lines, and particularly the larger carriers, are giving serious study to the question. Machines for recording rough handling are being more extensively used and increased activity along this line would clearly indicate steady progress.

There appear divided opinions as to the feasibility of restricting speed of cars to the limit of two or three miles per hour at time of impact, but failure of other methods to secure desired ends will, in the opinion of your committee, result in the recognition of this essential principle.

### Fruits and Vegetables

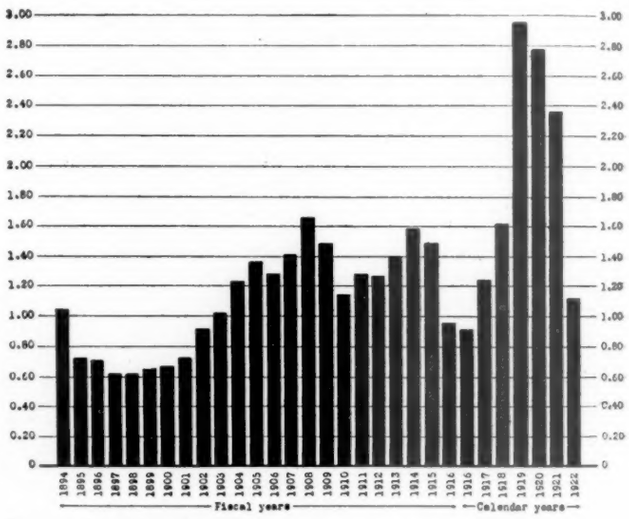
Your committee and its special representatives are much concerned over the abnormal and increasing percentage of amounts chargeable to loss and damage of fruits and vegetables. Analysis of individual line reports having shown that 20 carriers are assuming 90 per cent of the total, the representatives of these 20 lines have been formed into a national committee for the purpose of specializing in an intensive study of this problem. Arrangements have been perfected for special monthly reports from these 20 lines to show amounts chargeable to the individual commodities (approximately 18 in number) in the fruit and vegetable group. From these special statistics your committee is hopeful of determining at a very early date just which of the commodities are causing the greatest amount of trouble, with the view of concentrating at initial and destination points on those selected commodities.

Since the last report, at which time attention was called to the great need for increased destination inspection of fruits and vegetables, your committee is pleased to report improved conditions, particularly in Eastern territory, to which territory more than 65 per cent of these commodities are destined.

### Box Strapping

An energetic campaign has been carried on throughout the year to increase the use of metal strapping or wire binding for less carload merchandise containers. The special circular promulgated by your committee in May, 1922, for distribution to shippers, has had a wide and effective distribution.

Results of the campaign are best shown by the great in-




*Bureau of Railway Economics*

**Amount of Every Dollar of Freight Revenue Spent for Loss and Damage to Freight—in Cents**

crease in the use of steel binding for domestic shipments, current use of wire and strap material being conservatively estimated at 100 per cent more than at the beginning of last year; also, are doubtless to some extent reflected in the reduction of 56 per cent in claims for concealed, unlocated and robbery losses from packages, which were reduced from $14,373,379 to $6,349,780.

It is recommended:

(1) That all claim conference and prevention meetings keep this subject on the active docket in order that the following recommendations may be given effect;

(2) That loss and damage reports be analyzed currently to develop, which firms are receiving an unusual number of shipments in bad order, such condition to be investigated to determine whether strapping could be used advantageously and, if so, the matter should be brought to shipper's or receiver's attention;

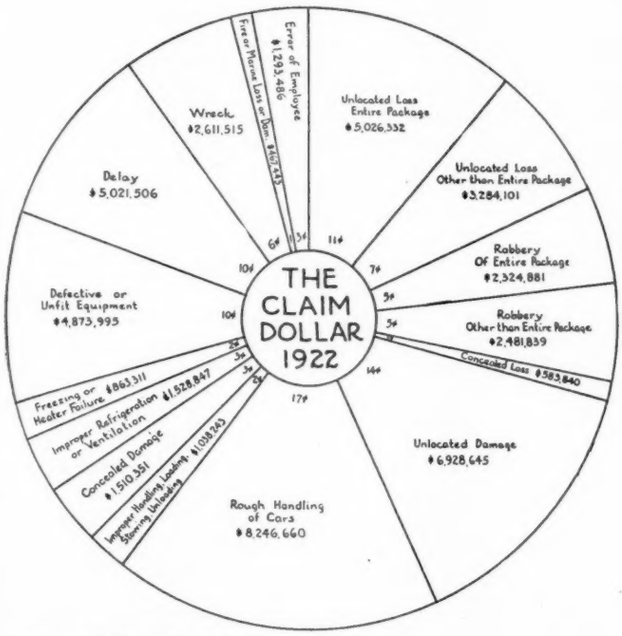
(3) That freight agents, warehouse foremen, receiving and delivery clerks be requested to watch for freight which could be strapped to advantage and report such cases;

(4) That, as far as practicable, railway representatives, in preference to writing letters, should personally call on firms who should use strapping;

(5) That where shippers who should use strapping are located at off-line points letters should be written to them by the officer in charge of prevention, or such officer should take up the question with the corresponding officer of the road on which shipper is located, and the advantage of box-strapping fully presented.

### Claims on Cement and Clay Manufactured Products

In view of the excessive amount of claims paid for breakage of clay and cement, sewer pipe, hollow building, drain and roofing tile, and the difficulty of dealing effectively with the problem territorially or by the railways individually, by direction of your committee a special committee has been


THE CLAIM DOLLAR 1922
Unlocated Loss Entire Package $5,026,332
Unlocated Loss Other than Entire Package $3,284,101
Robbery Of Entire Package $2,324,881
Robbery Other than Entire Package $2,481,839
Concealed Loss $583,840
Unlocated Damage $6,928,645
Rough Handling of Cars $8,246,660
Improper Handling Loading Stowing Unloading $1,038,263
Concealed Damage $1,510,351
Improper Refrigeration or Ventilation $1,528,847
Freezing or Heater Failure $863,311
Defective or Unfit Equipment $4,873,995
Delay $5,021,506
Wreck $2,611,515
Fire or Marine Loss or Dam. $867,433
Error of Employee $1,293,486

*Bureau of Railway Economics*

organized to make an exhaustive study of the subject from a national standpoint.

Each claim conference has appointed a special committee to handle the subject for its territory, the chairman thereof being a member of the national committee, which also includes representatives of the classification committees, inspection bureaus and individual railways best informed upon the subject.

### Co-operation

In addition to the working arrangements with various organizations mentioned in our last report, a definite program for co-operation has been established with the Freight Station Section of the Operating Division, through its appointment of a sub-committee to work with your committee and its special freight claim prevention representatives in freight claim prevention matters.

Your committee reported last year a similar arrangement with the Protective Section, Operating Division. In pursuance of the plan outlined, there was held on February 29, 1923, in New York, the first of a series of territorial meetings of protective, freight claim and claim prevention officers for the purpose of discussing mutual problems. It is planned to hold similar joint meetings in all of the territories during the coming year.

Your committee has been working closely with the Freight Container Bureau of the American Railway Association, and it urges that the membership keep that Bureau informed of damages to freight where the nature of the container is a contributing factor. The activities of the Bureau are now being particularly directed to containers for fresh fruits, vegetables and furniture.

The express companies have approved a plan for co-operation in claim prevention work and your committee is combining express claim prevention with freight claim prevention wherever the interests can be joined.

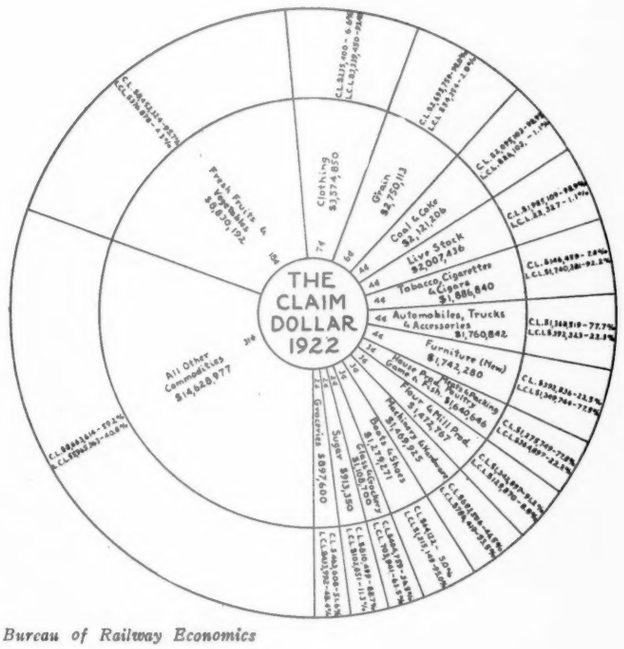
The formation of the Pacific Ocean Claim Association is cited as one of the outstanding events of 1922 in freight claim prevention activities as related to the steamship business, and paves the way for similar organization in co-operation with which the rail lines can advance the effectiveness of loss and damage prevention.

Your committee has continued valuable co-operative relations with the U. S. Forest Products Laboratory, Madison, Wis.

It having been mutually agreed that the committee on freight handling service of the Transportation Division will formulate a standard code of car loading rules for commodities not now covered, the members of the Freight Claim Division are requested to send to the secretary of the Freight Claim Division any written material, drawings, plans or other matter relating to the subject. It is the purpose to ultimately cover in such code all commodities abnormally reflected in the claim account.

### Contact With Shipping Public

Attention is called to Circular No. 513 issued by the National Industrial Traffic League as evidence of activity with shipping organizations. Members are requested to reproduce this circular regarding the correct billing of freight to agents for presentation to local shippers, with the idea of




*Bureau of Railway Economics*

enlisting their co-operation in this matter. The possibilities of extending the loss and damage prevention activities by direct and personal contact with the shipping public through the medium of addresses at meetings arranged under the auspices of chambers of commerce, traffic clubs and similar organizations, have become more apparent as this feature of the work progresses. During the past year the Special Representatives and individual members of this committee and the general committee availed themselves of invitations to speak before various associations and clubs, outlining the general scope of our claim prevention efforts and soliciting co-operation and assistance along special lines.

These addresses have been of special benefit in furnishing opportunity not only to impress the value of loss and damage prevention co-operation but also to explain the peculiar difficulties attending freight claim adjustment work, with which the shipping public in general is not fully acquainted, and along these lines these meetings have been of inestimable value. Members are urged not to relax their activities in connection with this subject.

### Increasing Percentage of Damage to Car Load Shipments

Statistics indicate that the percentage of loss and damage chargeable to carloads is steadily increasing, indicating great need for a co-ordinated program of supervision to protect the interests of carriers as a whole, particularly in interline traffic.

[J. B. Baskerville (N. & W.) was chairman of this committee].

### Discussion

Discussion of this report was centered, at the committee's suggestion, on rough handling and loss and damage to fruits and vegetables.

There was some discussion as to the merits and demerits of the impact recording machines as a means of localizing and placing the responsibility for rough handling. The general trend of thought was, it seemed, that these machines, properly used, accomplished the desired purpose.

A resolution was passed calling for the instruction of freight station employees in the importance of ascertaining the true cause for all damage detected and reporting the causes in detail and recommending that an employees' committee on rough handling be formed in every important yard.

No action was taken on a proposal to call a general claim prevention congress, the general feeling being that the district claim conferences were able to care for this class of work.

The flimsy containers used by shippers of fresh fruits and vegetables were called the cause of great damage to contents —a loss which it was unfair to ask the railroads to compensate. An instance was cited of lettuce shippers on the Pacific coast loading ice in the body of the car, thereby saving great sums in refrigeration charges, and attempting to collect damages from the railroads for the damage done by the large cakes of ice to the lettuce in fragile containers.

# General Wage Increase Hearing Set for June 11

THE HEARING on the petition of the Brotherhood of Maintenance of Way Employees and Railway Shop Laborers for wage increases ranging from 8½ to 15 cents an hour will be opened by the Railroad Labor Board on June 11. The Brotherhood's request, which was filed on April 25, asks advances as follows: Shop foremen and assistant foremen, 15 cents an hour; section foremen and assistant foremen, 11 cents an hour; mechanics, 14 cents an hour; mechanics' helpers, 8½ cents an hour; trackmen, 15 cents an hour; track and shop laborers and watchmen, 11½ cents an hour. The application affects more than 100,000 maintenance of way and shop employees on over a score of major roads and, if granted, will involve an estimated payroll increase of $25,000,000 annually.

Since the filing of the petition, the number of defendant roads in this dispute has been materially reduced through the granting of voluntary increases by several of the lines. The settlements which have been effected have been made on increases averaging approximately three cents an hour. Among the roads which have negotiated satisfactory agreements with their maintenance of way and shop employees are the Atchison, Topeka & Santa Fe, the St. Louis-San Francisco, the Baltimore & Ohio, the New York, New Haven & Hartford, the Pere Marquette, the New York Central, the Great Northern, the Cleveland, Cincinnati, Chicago & St. Louis, the Seaboard Air Line, the Central of Georgia, the Florida East Coast, the Gulf Coast Lines, the Chicago, Burlington & Quincy, the Philadelphia & Reading, the Boston & Maine, the Lehigh Valley, the Maine Central, the Northern Pacific, the Chicago, Rock Island & Pacific and the Minneapolis & St. Louis.

Although the request of the brotherhood is for increases ranging from 8½ to 15 cents an hour, it is thought probable that the satisfactory settlements which have already been concluded on increases averaging three cents an hour will materially affect the decision of the board. It is generally conceded that the board will take favorable action on the petition of the brotherhood, but it is thought that any increases which are granted will be approximately equal to those which have been negotiated locally on the various roads.

Since this is the first of a series of hearings on petitions for general wage increases the proceedings and outcome of the hearing will be watched with considerable interest. In this hearing the increased cost of living as well as the so-called "living wage theory" will be advanced by the brotherhood as their reasons for a general wage increase at this time. The attitude of the board toward such testimony and its final action will constitute an authoritative precedent for future cases.

### New Wage Increases and Petitions

The liberal attitude of the railroad managements toward the question of wage increases has been further evidenced during the past week by general wage increases on several lines. An annual increase amounting to approximately $500,000 has been granted by the Northern Pacific to its 8,330 maintenance of way employees. The details of the increase follow: Bridge and building foremen and their assistants, $10 a month; fence gang foremen, $6.84 a month; pile driver engineers, 3¼ cents an hour; section foremen and assistants, $6.84 a month; mechanics, 3¼ cents an hour; mechanics' helpers, one cent an hour; track laborers, two cents an hour; ditching and hoisting firemen and pumpers, three cents an hour; crossing watchmen, one cent an hour, and track, bridge and tunnel watchmen, two cents an hour.

The Chicago, Rock Island & Pacific has granted an increase to 12,700 employees in the maintenance of way department which involves an aggregate annual payroll increase of $335,000. Section foremen received an increase of $2.04 per month; bridge and building foremen and their assistants and assistant section foremen, 2½ cents an hour; mechanics, two cents an hour; mechanics' helpers, track and shop laborers and drawbridge tenders, one cent an hour.

Maintenance of way employees of the St. Paul Union Depot Company have been granted an increase of two cents an hour for those in service less than one year and three cents an hour for those in service over one year.

The Philadelphia & Reading has granted an increase to its clerical forces of three cents an hour and an increase of $5 a month to telephone and switchboard operators. The number of employees involved is 3,200 and the aggregate annual increase is $228,000.

The Minneapolis & St. Louis has granted increases to 1,150 employees in its maintenance of way department as follows: Bridge and building foremen, $10 per month; bridge and building painters, two cents an hour; track and shop laborers, drawbridge tenders, pumpers and watchmen, one cent an hour.

In addition to the wage increases authorized, several petitions for advances have been received by the Labor Board.

The Brotherhood of Railway Station Employees has filed a dispute with the Boston & Maine involving a request for an increase in rates of pay, a revision of the overtime rule and a new rule covering vacations with pay. This case has been set for hearing on June 11. The Brotherhood of Railway and Steamship Clerks has filed a petition for increases in rates of pay and changed rules for the employees it represents in the service of the American Railway Express Company. The United Brotherhood of Maintenance of Way Employees and Railway Shop Laborers has filed a dispute with the Pennsylvania involving a request for an increase in rates of pay. The last two cases have not yet been docketed.

A decision rendered by the Labor Board on March 21 ordering the shopcrafts employees in the service of the New York Central to be returned from a piecework to an hourly basis of pay has been suspended for a minimum period of 60 days. This ruling is made on condition that the shopmen are to receive a rate of pay during the time of suspension which will average not less than the hourly rate prescribed by the board. The board has agreed that if the New York Central brings to it a petition for a piecework system of payment within the 60 day period, it will further suspend its decision until the final disposition of the controversy.

Miscellaneous employees on the Central region of the Pennsylvania, including elevator operators, watchmen, freight and storehouse laborers, messengers, janitors and porters have been granted an increase of two cents an hour.

# Donomarent Safety Tank Car Outlet Valve

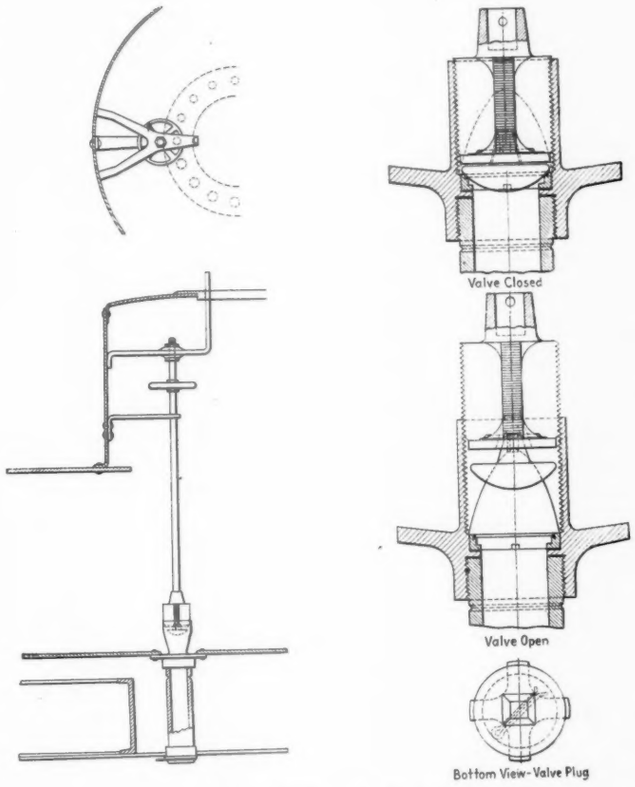
THE PRESENT A.R.A. standard type outlet valve and connection for tank cars, judging by the experience of several years, does not embody in its design all the desirable features that such an outlet should possess. Realizing the fact that the present design was faulty, the Bureau of Explosives has endeavored to arouse an interest that would lead to improvements. Several new valves have been brought out, among which is one known as the "Donomarent" outlet, designed by T. J. Entwisle, superintendent car shops, Southern Cotton Oil Company, New Orleans, La., which will apparently overcome several of the objections to the present design.

An ideal tank car outlet and valve is called upon to meet several difficult requirements, among which the following may be mentioned: The seat should be self-cleaning to insure a tight closure; it should be impossible to open the valve without removing the dome cover plate and breaking the seal to prevent pilfering the contents of the car; distortion or "breathing" of the tank should not cause the valve to leak or become wedged and preferably it should be possible to repair a broken outlet without removal of the contents of the car.

Referring to the illustration, it will be noted that the outlet flange is riveted to the bed sheet of the tank in the usual manner while the nozzle is a separate piece. By turning a groove in the nozzle near the end which is screwed into the flange, a point of weakness is provided at which a break will occur should a sufficient force be exerted. In this event, the valve would not be unseated or any of the contents lost. The remaining portion can be readily removed and a new nozzle applied. The flange not being damaged, it would not be necessary to pump out the tank to make repairs.

The separate valve seat is of brass and can be readily unscrewed for reseating or renewal. The valve itself is of spherical shape without wings, thus insuring positive seating and eliminating the danger of cocking. On the upper side of the valve is a tapered square projection which fits into a corresponding socket in the valve plug. The valve plug has four wings, threaded to fit the inwardly extended portion of the flange. The bottom of the plug has a socket for the valve, as stated, the two parts being connected by a cotter or bolt passing through an oblong hole. The design provides a telescoping connection, the effect of which is to cause the valve to be rotated about two-and-one-half turns after it is seated and before it is locked shut and also as it is opened, before it is lifted from its seat. This will clean off gummy residue, grit or other substances from the seat, insure tight closure and keep the valve and seat in good condition for a long period.

The flanged portion on the lower end of the valve plug is screwed down tight against the valve after it has been




**Donomarent Safety Outlet Valve for Tank Cars**

closed and makes it impossible for anyone to lift the valve from the seat by a bar or turning tool. The valve can only be opened by breaking the seal and removing the dome cover, a safety precaution against robbery of considerable importance.

The extended portion of the flange which forms the valve cage is provided with large openings which give unrestricted flow to the contents of the car and overcomes foaming. The position of the openings and the location of the valve seat insures complete drainage of the full contents of the car.

The upper part of the valve plug is extended to form a socket for the rod to which the hand wheel is attached. As the threaded connection is between the plug and the cage in the bottom of the tank, distortion of the tank by filling or "breathing" in service cannot cock the valve, wedge it, distort or bend the rod. Neither vibration nor contraction and expansion effect the seating of the valve.

The hand wheel rod is extended above the wheel and a position indicating device attached which extends up into the opening of the dome in such a manner that the cover cannot be replaced until the valve is locked shut.

It is stated that these valves have proved entirely satisfactory during the few months that they have been in service and as a result the valves are being applied to other cars.

# Ferro Carbon Titanium Reduces Rail Failures

PRIOR TO 1915 the Titanium Alloy Manufacturing Company, Niagara Falls, N. Y., issued a series of rail report bulletins containing the results of a large amount of investigation work done to demonstrate the improvement effected in rail steel by treatment with ferro carbon-titanium. While engineers generally were favorably impressed with this work, they very naturally questioned whether the demonstrated reduction of segregation and the greater cleanness in the treated steel would cause any material decrease in the number of failures in service. The data which follows have been compiled from bulletins Nos. 81 and 91 of the Rail committee of the American Railway Engineering Association, covering all years from 1913 to 1919, inclusive, in which any titanium-treated rails were rolled for roads reporting to the association, tonnages of titanium-treated rails not having been reported separately since 1919.

In considering these results it is interesting to recall the statement of W. M. Wickhorst, then engineer of tests of the Rail committee, in a paper read before the American Society for Testing Materials, in June, 1913, which follows:

"The conclusion seems to be that for rails a well deoxidized, quiet-setting steel must be used in order to avoid excessive segregation and to obtain rail with a uniform hardness at the wearing surface in the several rails of an ingot. A solution of the ingot problem means the prevention of about half of the failed rails of the country."

The average number of failures per year in service per 100 miles of track for all untreated open hearth rails covered in these schedules was 14.3, and for titanium-treated open hearth rails was 6.8. For Bessemer rails the average number of failures per year in service per 100 miles of track was 24.6 for the untreated steel and 5.2 for the titanium-treated rails. Thus, the failures in the titanium-treated open hearth steel in service have been 48 per cent of those for untreated open hearth steel while those in the titanium-treated Bessemer rails were only 21 per cent of those in untreated Bessemer steel, this latter very low figure being due to an excessively high number of failures in untreated Bessemer rail from one plant.

FAILURES IN BESSEMER RAIL STEEL FOR 1913 AND 1914 ROLLINGS AS REPORTED A. R. E. A. BULLETIN NO. 81 TO RAIL COMMITTEE FOR PERIOD ENDING OCTOBER 31, 1918

| Kind of rail and mill rolled | Mileage reported 1913 | Mileage reported 1914 | Failures per 100 track miles 1913 | Failures per 100 track miles 1914 | Average failures per year in service per 100 track miles |
|---|---|---|---|---|---|
| Titanium treated | 94.59 | 31.91 | 51.8 | 0.0 | 5.2 |
| Maryland untreated | 443.51 | 91.87 | 69.9 | 77.3 | 16.6 |
| Lackawanna untreated | 94.05 | 62.08 | 77.6 | 85.3 | 18.4 |
| Illinois untreated | 197.28 | 87.37 | 98.3 | 86.9 | 20.6 |
| Carnegie untreated | 228.64 | 77.74 | 151.3 | 57.9 | 22.3 |
| Cambria untreated | 60.44 | 11.56 | 243.2 | 129.7 | 40.5 |
| Algoma untreated | 7.96 | 66.78 | 1181.0 | 324.9 | 158.6 |
| In Service | .... | .... | 5 Years | 4 Years | .... |

Mileage of Titanium-Treated Bessemer was made up as follows:

1913—Lackawanna.... 37.43 Illinois..... 57.16
1914—Lackawanna.... 23.47 Illinois..... 8.44

SCHEDULE OF MAXIMUM AND MINIMUM FAILURES PER YEAR FOR 100 TRACK MILES FOR ANY ONE YEAR. BULLETIN NO. 81 A. R. E. A. FOR PERIOD ENDING OCTOBER 31, 1918

| Kind of Rail and Mill Rolled | Open Hearth Maximum | Open Hearth Minimum | Bessemer Maximum | Bessemer Minimum |
|---|---|---|---|---|
| Titanium treated | 9.9 | 0.0 | 10.4 | 0.0 |
| Carnegie untreated | 16.1 | 6.3 | 30.2 | 14.4 |
| Colorado untreated | 16.4 | 5.0 | .... | .... |
| Tennessee untreated | 18.5 | 10.1 | .... | .... |
| Pennsylvania untreated | 23.0 | 9.3 | .... | .... |
| Bethlehem untreated | 21.2 | 5.4 | .... | .... |
| Lackawanna untreated | 23.0 | 12.3 | 21.3 | 15.5 |
| Algoma untreated | 21.0 | 7.6 | 236.2 | 81.2 |
| Cambria untreated | 24.0 | 11.3 | 46.8 | 32.4 |
| Illinois untreated | 20.9 | 13.6 | 21.7 | 19.6 |
| Maryland untreated | 31.9 | 9.0 | 19.3 | 13.9 |

FAILURES IN OPEN HEARTH RAIL STEEL AS REPORTED IN A. R. E. A. BULLETIN NO. 81 TO RAIL COMMITTEE FOR PERIOD ENDING OCTOBER 31, 1918

| Kind of rail and mill rolled | Mileage reported 1913 | 1914 | 1915 | 1916 | Failures per 100 track miles 1913 | 1914 | 1915 | 1916 | Average failures per year in service per 100 track miles |
|---|---|---|---|---|---|---|---|---|---|
| Titanium-treated rail | 101.14 | 33.32 | 12.66 | 10.21 | 49.5 | 30.0 | 0.0 | 19.6 | 6.8 |
| Carnegie untreated rail | 761.33 | 487.40 | 722.03 | 873.59 | 82.2 | 25.4 | 16.9 | 13.2 | 8.7 |
| Colorado untreated rail | 1,205.68 | 1,047.82 | 1,030.66 | 1,172.01 | 82.1 | 27.3 | 15.1 | 15.7 | 9.0 |
| Tennessee untreated rail | 1,788.25 | 1,848.70 | 1,005.90 | 1,197.84 | 57.3 | 44.2 | 30.5 | 37.1 | 12.7 |
| Pennsylvania untreated rail | 617.63 | 271.13 | 161.30 | 47.75 | 71.2 | 38.0 | 27.9 | 46.1 | 14.0 |
| Bethlehem untreated rail | 981.95 | 558.68 | 534.25 | 515.07 | 97.3 | 21.6 | 41.0 | 42.5 | 15.0 |
| Algoma untreated rail | ..... | 76.62 | 374.74 | 221.08 | .... | 67.9 | 22.9 | 42.1 | 15.2 |
| Lackawanna untreated rail | 1,379.17 | 746.61 | 732.50 | 942.87 | 115.3 | 51.0 | 38.8 | 25.5 | 15.3 |
| Cambria untreated rail | 408.69 | 300.34 | 255.68 | 194.70 | 120.1 | 64.3 | 34.1 | 26.1 | 16.3 |
| Illinois untreated rail | 3,002.97 | 1,472.04 | 1,890.44 | 2,476.75 | 96.2 | 83.4 | 40.0 | 26.0 | 16.5 |
| Maryland untreated rail | 410.29 | 480.30 | 291.28 | 365.74 | 159.7 | 36.2 | 99.6 | 61.8 | 26.2 |
| In service | ..... | ..... | ..... | ..... | 5 years | 4 years | 3 years | 2 years | ... |

1913 Mileage of Titanium-treated rail was made up as follows: Bethlehem 13.21, Carnegie 23.23, Illinois 64.70

1914 Mileage of Titanium-treated rail was made up as follows: Lackawanna 26.28 Illinois 7.04

1915 Mileage of Titanium-treated rail was made up as follows: All at Lackawanna

1916 Mileage of Titanium-treated rail was made up as follows: All at Cambria

SUMMARY OF TITANIUM-TREATED OPEN HEARTH RAILS AS REPORTED IN A. R. E. A. BULLETIN NO. 91 FOR PERIOD ENDING OCTOBER 31, 1919

| Year Rolled | Lb. Per Yard | Section | Specified Carbon Min. | Specified Carbon Max. | Total Tons Laid | Equiv. Track Miles | Head | Web | Base | Bkn. | Total | Per 100 Track Miles | Per 100 Miles Track Per Year | Railroad | Mill |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1914 | 90 | A. R. A.-B. | .62 | .75 | 996 | 7.04 | 3 | 0 | 5 | 5 | 13 | 184.7 | 37.0 | N. P. | Illinois |
| 1914 | 100 | P. S. | .62 | .75 | 2,907 | 18.50 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | Penn.-E. | Lackawanna |
| 1914 | 105 | Dudley | .62 | .75 | 1,277 | 7.74 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | N. Y. C.-E. | Lackawanna |
| .... | ... | ..... | .. | .. | 5,180 | 33.28 | 3 | 0 | 5 | 5 | 13 | 39.0 | 7.8 | ..... | ..... |
| 1915 | 105 | Dudley | .62 | .75 | 2,089 | 12.66 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | N. Y. C.-E. | Lackawanna |
| BESSEMER | | | | | | | | | | | | | | | |
| 1914 | 90 | A. R. A.-B. | .45 | .55 | 1,194 | 8.44 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | N. P. | Illinois |
| 1914 | 90 | A. R. A.-B. | .45 | .55 | 3,320 | 23.47 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | N. P. | Lackawanna |
| UNTREATED OPEN HEARTH AND BESSEMER | | | | | | | | | | | | | | | |
| 1914 | ..... | .. | .. | | 254,822 | 1,743.16 | 811 | 43 | 182 | 677 | 1,713 | 98.3 | 19.6 | ..... | Illinois |
| 1914 | ..... | .. | .. | | 123,833 | 845.33 | 193 | 42 | 15 | 416 | 666 | 78.7 | 15.7 | ..... | Lackawanna |
| 1915 | ..... | .. | .. | | 114,506 | 753.49 | 250 | 27 | 14 | 141 | 432 | 57.3 | 14.3 | ..... | Lackawanna |
| TITANIUM-TREATED OPEN HEARTH AND BESSEMER | | | | | | | | | | | | | | | |
| 1914 | ..... | .. | .. | | 2,190 | 15.48 | 3 | 0 | 5 | 5 | 13 | 84.0 | 16.8 | ..... | Illinois |
| 1914 | ..... | .. | .. | | 7,504 | 49.71 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | ..... | Lackawanna |
| 1915 | ..... | .. | .. | | 2,089 | 12.66 | 0 | 0 | 0 | 0 | 0 | 0.0 | 0.0 | ..... | Lackawanna |

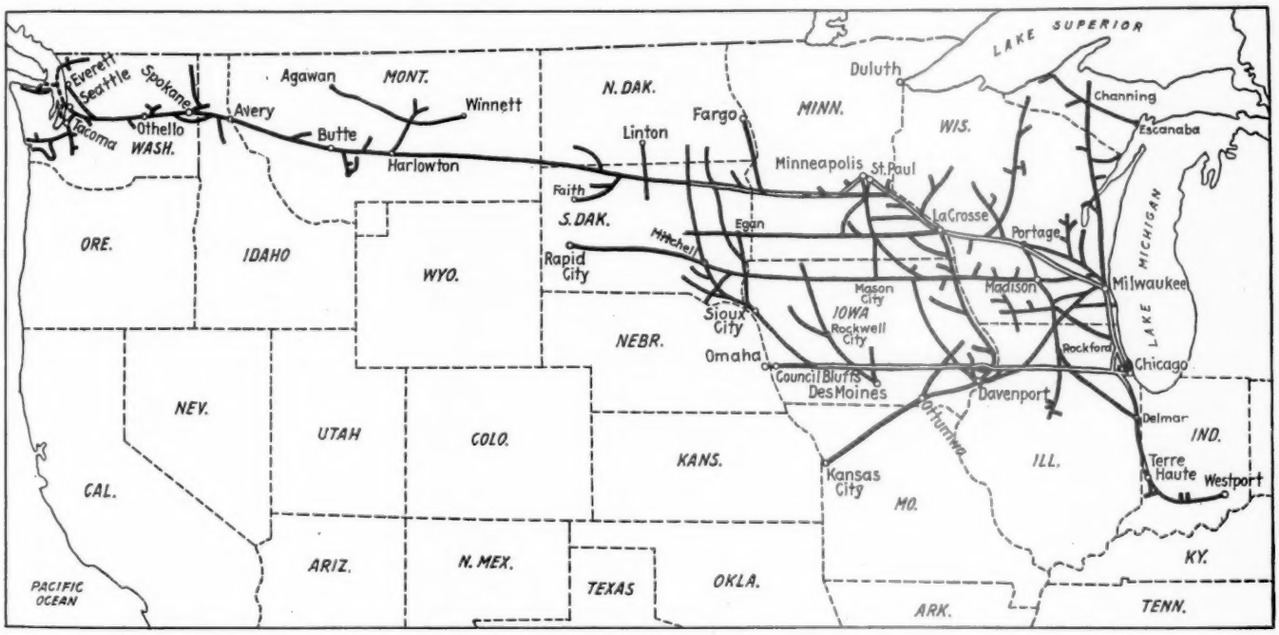
1916—Lot of 125-lb. P. S. Titanium-Treated Open Hearth rail reported in Bulletin No. 81 not reported separately in Bulletin No. 91.

# Milwaukee Makes Large Equipment Expenditures

## Ease of Financing with Equipment Trust Certificates Enables Property to Overcome Former Shortage

THE CHICAGO, MILWAUKEE & ST. PAUL has of late been receiving a somewhat unusual amount of attention in financial circles. For the past two years it has failed to earn its fixed charges. There are apparently many, however, who believe that the worst in its situation has passed. It is the recovery from its low ebb which is the reason for the attention which is being paid the road.

Prior to 1917 the Chicago, Milwaukee & St. Paul had been paying 7 per cent on its preferred stock and 4½ per cent on its common stock, since which time it has made no dividend disbursements whatever. The property had a standard return for operations during federal control of $27,945,819. In 1918 it earned for the government only 4 million dollars; in 1919, only 3¼ million, and in 1920, the low point in its operations in recent years, it suffered a deficit after rents of 15 million. In 1921 it had a net after rents of 5 million and in 1922, a net of 13 million. The 1922 figure represented a marked improvement over the years immediately preceding it and to that extent one may be optimistic about its immediate future. When it is realized, however, that the 1922 net operating income was less than one-half the standard return based on the average for the three years ended June 30, 1917, and that the road came through the year with a corporate deficit after fixed charges of 6 million dollars; or further, that the 1922 net includes the operations of the Chicago, Terre Haute & Southeastern whereas the standard return did not, it will be evident that the Milwaukee still has considerable ground to cover before one can properly feel as optimistic as one might desire about its prospects.




**The Chicago, Milwaukee & St. Paul**

### Electrification and Puget Sound Extension

It is customary in speaking about the Milwaukee situation to comment on its Puget Sound extension and the electrification of its line through the Bitter Root mountains and the Cascades. In many quarters there is an impression that the Milwaukee has been unable to secure an adequate utilization of its extension to Puget Sound, although of late there has been an increasing willingness to admit that the line is proving of increasing value because of the enormous lumber traffic and other transcontinental business which it brings to the Milwaukee system. A point in this connection that is worth bearing in mind is that the Milwaukee serves an area on the western shore of Puget Sound, the development of which is a source for lumber and has hardly been begun. The long haul on the lumber, the present traffic in that commodity, and the future possibilities in connection with it, are among those things which are usually put down as favorable.

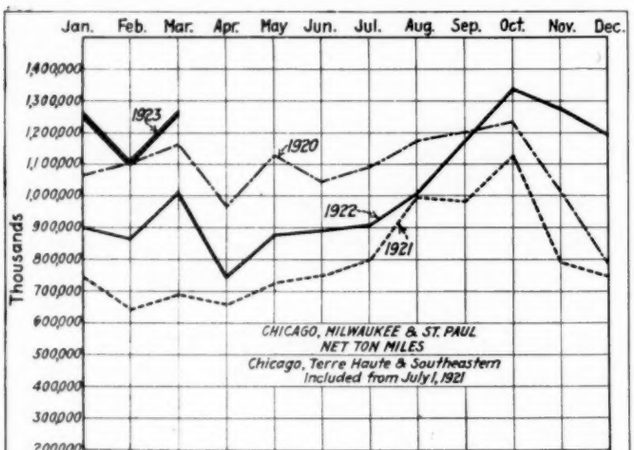
Electrification of the 640 miles of Milwaukee main line is a subject of frequent discussion. The unfortunate feature is that figures have not been made available to show accurately whether or not the adoption of electrification is proving advantageous from an operating point of view. The impression is that it is questionable whether sufficient operating economies have been secured to compensate for the enormous fixed charges of the electrical installation.

In July, 1921, the Chicago, Milwaukee & St. Paul leased the Chicago, Terre Haute & Southeastern. As of January 1, 1922, it acquired control of the Chicago, Milwaukee & Gary. It is generally expected that the acquisition of these two lines should prove of leading value to the Milwaukee. The Chicago, Terre Haute & Southeastern extends southeast of Chicago into the coal fields of Indiana. It supplies the parent company with a source for fuel supply and in addition, and particularly in connection with the Chicago, Milwaukee & Gary, it offers a route around the congested terminals at Chicago which should assist the Milwaukee considerably in taking care of the business which it interchanges with eastern roads. A difficulty of the Milwaukee has al-

ways been its high costs of fuel, resulting primarily from the freight charges which it had to pay on its coal. The control of the C. T. H. & S. E. remedies this situation. Prior to its control by the Milwaukee, the coal produced along its lines was very largely intended for local consumption. An interesting part of the work carried on by the Milwaukee traffic department since the acquisition of control has been the effort made to give the coal producers on the Terre Haute line an outlet for their coal in the Milwaukee territory, notably east of the Twin Cities. This is a development which should prove of great assistance to the system.

### Acquisitions of Equipment

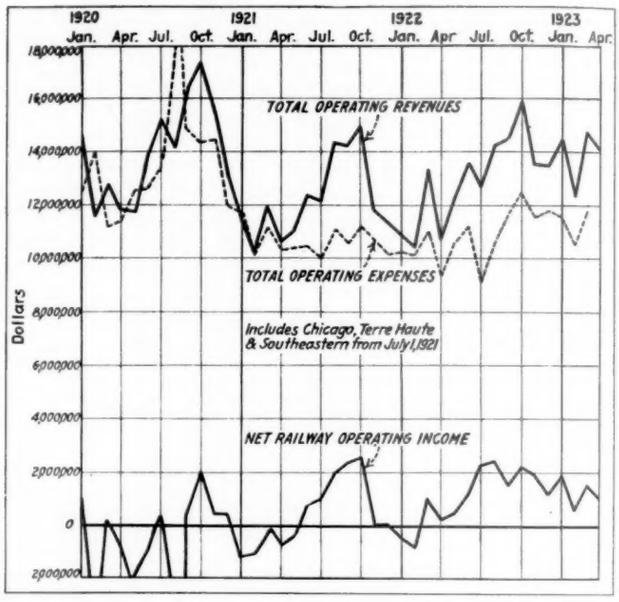
The Milwaukee has suffered for many years from a shortage of equipment. It is interesting that the number of locomotives owned at the end of 1922, exclusive of C. T. H. & S. E. equipment, was only 80 in excess of the number owned on June 30, 1913, whereas the number of freight cars was nearly 3,000 less than on June 30, 1913. In 1921 and 1922, the Milwaukee had a debit equipment rent balance of approximately $3,000,000, noteworthy as being very much in contrast with the opposite situation on its neighbors, the Great Northern and Northern Pacific. Such a dearth of equipment must have proved a serious handicap to the Mil-




**Milwaukee Traffic January, 1920, to Date**

waukee in handling the very competitive situation in its territory. However, the company has of late made extraordinary efforts to remedy the situation. Roughly, it has purchased no less than $34,000,000 worth of cars and locomotives since the end of federal control, in addition to which large sums have been appropriated for equipment rehabilitation. In 1921 the company received 171 new locomotives, including 100 standard locomotives allocated by the Railroad Administration. In 1921 it received 29 and in 1922, 25 additional, and at the beginning of 1923 it had 25 still on order. There have also been acquisitions of electrical equipment. The system received 4,000 of the U. S. R. A. standard box cars. In 1922 it received 2,500 composite gondola cars largely for the C. T. H. & S. E. coal traffic and about 3,000 box cars. An extensive rehabilitation program has also been carried on, $5,000,000 having been spent for this purpose in 1922.

Some authority has expressed the opinion that expendi-




**C. M. & St. P. Revenues and Expenses for the Past Four Years**

tures for additions and betterments should be in the ratio of about $3 for way and structures to each dollar spent for new equipment. This proportion is not being carried out by the railroads of the country as a whole, and this fact is essentially true of the Milwaukee. In 1922 the company charged a total of approximately $10,000,000 to additions and betterments, of which approximately $9,000,000 was a net charge to equipment and but $1,000,000 was a net charge to roadway and structures. Instead of what has been termed the proper ratio of $3 to road and structures to each dollar for equipment, the Milwaukee in 1922 appropriated but 11 cents for additions to roadway and structures to each dollar for new equipment. In 1920 expenditures for road and structures were in the ratio of $5 for road to $18 for equipment and in 1921 in the ratio of $1.75 to $5. This situation is a result of the Milwaukee's financial difficulties and its inability to secure money on mortgage at a reasonable rate as contrasted with the ease with which money may be

CHICAGO, MILWAUKEE & ST. PAUL—TRAFFIC AND EARNINGS, 1913 TO 1922

| Year ended June 30 | Total op. revenues | Freight revenues | Total op. expenses | Net op. revenues | Op. ratio | Net after fixed charges | Revenue tons | Rev. tons one mile | Av. haul | Earnings per ton per mile cents | Av. train load | Av. car load |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1913 | $94,084,055 | $67,964,161 | $62,883,968 | $31,200,087 | 66.84 | $18,140,745 | 34,805,491 | 8,570,061,411 | 246 | 0.793 | 357 | 16.78 |
| 1914 | 93,613,700 | 65,266,420 | 62,890,301 | 30,723,399 | 67.18 | 15,476,286 | 33,007,277 | 8,079,689,505 | 245 | 0.808 | 380 | 16.50 |
| 1915 | 91,435,374 | 63,953,799 | 61,971,701 | 29,463,673 | 67.78 | 11,968,283 | 32,959,392 | 8,185,988,375 | 248 | 0.781 | 390 | 16.84 |
| 1916 | 105,646,484 | 76,036,097 | 69,120,958 | 36,525,526 | 65.43 | 16,717,357 | 38,313,345 | 10,043,235,657 | 262 | 0.757 | 425 | 17.94 |
| Year ended Dec. 31 | | | | | | | | | | | | |
| 1916 | 110,609,689 | 79,648,513 | 73,765,051 | 36,844,638 | 66.69 | 16,068,260 | 39,986,136 | 10,747,232,415 | 269 | 0.741 | 442 | 18.15 |
| 1917 | 113,739,202 | 79,957,271 | 85,195,964 | 28,543,238 | 74.90 | 4,468,632 | 38,444,353 | 10,545,443,466 | 274 | 0.758 | 468 | 20.06 |
| 1918 | 132,894,455 | 96,623,658 | 122,196,105 | 10,698,350 | 91.95 | 6,227,891 | 40,307,047 | 11,504,301,469 | 285 | 0.840 | 536 | 22.89 |
| 1919 | 150,370,394 | 106,288,453 | 138,561,705 | 11,808,689 | 92.15 | 7,643,045 | 46,295,220 | 11,501,514,483 | 285 | 0.924 | 554 | 21.97 |
| 1920 | 168,158,734 | 117,183,815 | 164,697,121 | 3,461,613 | 97.94 | 4,366,071 | 45,041,277 | 11,384,600,804 | 253 | 1.029 | 544 | 22.38 |
| 1921 | 146,765,766 | 104,894,848 | 127,957,002 | 18,808,764 | 87.18 | def.11,070,609 | 34,067,136 | 8,283,212,410 | 243 | 1.266 | 493 | 21.15 |
| 1922 | 156,950,628 | 116,005,731 | 129,596,696 | 27,353,932 | 82.57 | def.6,143,168 | 42,034,285 | 10,601,913,667 | 252 | 1.094 | 543 | 22.18 |

Includes Chicago, Terre Haute & Southeastern from July 1, 1921.

secured through the issuance of equipment trust certificates. A person riding over the Milwaukee lines will, we believe, be impressed by the unusually good appearance of the locomotives, freight cars and passenger cars which he sees. He may not be so much impressed, however, by the shops or other facilities.

The Chicago, Milwaukee & St. Paul at present operates 11,030 miles of line. Its tracks fan out in the states of Wisconsin, Iowa, Minnesota and South Dakota, forming the original Chicago, Milwaukee & St. Paul and in addition to which there is a western extension to Puget Sound. Double track main line is to be found from Chicago north through Milwaukee and thence northwestward and westward through the Twin Cities as far as Aberdeen, S. D., and also from Chicago nearly to Omaha on the line to that city. The question often arises as to whether the former management may not have been somewhat unwise in double tracking such an extensive proportion of the property's main line mileage and there is some question even now as to whether the volume of traffic handled over portions of this double track line is still sufficient to warrant the expenditure which was necessitated to carry on the work. The electrified line now totals 649 miles and includes the section through the Bitter Route mountains from Harlowton, Mont., to Avery, Idaho and over the Cascades from Othello to Puget Sound.

### Improvement in 1922

Over this system the Milwaukee handles a diversified tonnage made up in 1922 as follows: 17.6 per cent, products of agriculture; 5.5 per cent, products of animals; 33.9 per cent, products of mines; 20.1 per cent, products of forests, and 18.5 per cent, manufactures and miscellaneous. Bituminous coal in 1922 constituted 16.6 per cent of the total tonnage. Normally, and prior to the acquisition of the Chicago, Terre Haute & Southeastern, coal frequently made up a larger percentage than this. The fact that the percentage was not larger in 1922 was unquestionably a result of the coal strike.

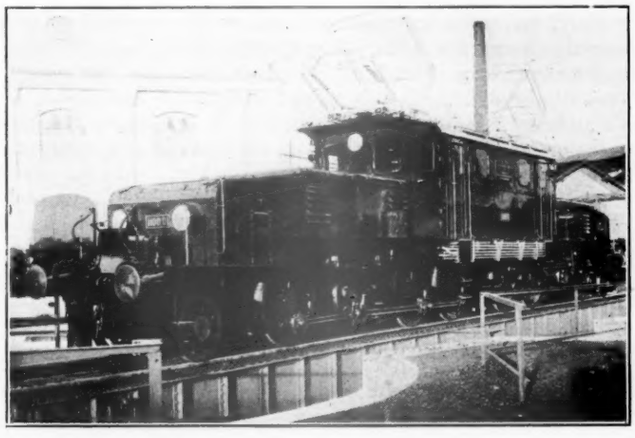
The 1922 operations of the Milwaukee showed a great improvement over 1921. In using the figures it will be borne in mind that the operating figures of the Chicago, Terre Haute & Southeastern are included from July 1, 1921. The net railway operating income for the year 1922 was $13,284,245 as compared with but $5,117,329 in 1921. This net operating income was not sufficient to permit the Milwaukee to earn its fixed charges. It has already been noted above that the net operating income was but one-half the standard return basis. After the payment of fixed charges, the income account showed a deficit of $6,143,168. In 1921 there was a deficit of $11,070,609. Further evidence of improvement carried out in 1922 is shown in the operating ratio for the year of 82.57, compared with 87.18 in 1921, the best figure which the Milwaukee has reported since 1917.

### Effect of C. T. H. & S. E. Acquisition Not Shown in 1922

Outside of the figure of net after fixed charges which is the most important thing in the report of the year's operations of any railroad, probably the factor in which we should be most interested in the St. Paul's 1922 report would be any evidences of a change in the operating situation of the property, due to its acquisition of the Chicago, Terre Haute & Southeastern. The coal strike in 1922 was so effective in the mines along the lines of that subsidiary, however, that the Milwaukee annual report gives very little indication of any assistance that the acquisition of the coal lines may have brought to the parent company. There was, to be sure, in 1922 a slight increase in the total tonnage of bituminous coal carried, but it is of interest that the percentage of coal to the total tonnage, as above noted, 16.6, compared with 19.4 per cent in 1921, with 18.2 per cent in 1920 and that the 1922 tonnage figure was very much less than that of 1920. Further than that, the amount of money paid for fuel by the Milwaukee in 1922 was much in excess of that paid in 1921, due partly to the increased volume of business and presumably partly due to the fact that the parent company had to secure its coal from distant sources. In short, it may be said that the 1922 coal situation was so abnormal and that there is practically no evidence in the 1922 report of any beneficial effects of the C. T. H & S. E. acquisition. It would be a matter of great surprise if the opposite is not true in the 1923 report.

The Milwaukee's traffic in 1922 showed a marked expansion over 1921, but it was still very much less than that in 1920. In 1922, as compared with 1921, there were marked increases in products of agriculture, notably in corn; in livestock; in ores and concentrates; in lumber and in manufactures. The tonnage of products of forests, although less than in 1920, was approximately 40 per cent greater than in 1921. The increased tonnage gave the system an increase of $10,184,862 in total operating revenues, the 1922 figure being $156,950,628. Operating expenses of $129,596,696 showed a decrease of $1,639,695 from 1921. President Byram in his annual report gives the estimate that the reductions in freight rates which took effect in agricultural products in January and other commodities in July, reduced the earnings approximately $12,000,000, partly offset by the decrease of $3,705,000 in wages, effective July 1. The coal strike, he estimates to have increased the cost of fuel in the amount of $2,195,000, besides such losses as may have been due to the elimination of coal traffic during the strike period. The Milwaukee settled with its railroad shopmen in September under the Baltimore plan. President Byram says that in addition to the interruption of traffic that may have been due to the strike and the suspension of repair work, "there was an extra expense of approximately $2,225,000 directly attributable to the strike." On the Milwaukee 16,400 men left the shops on July 1 and only about 1,400 remained at work.

The Milwaukee is starting 1923 very favorably. For the first four months its net operating income was $5,038,759 as compared with a deficit the same period last year of $71,268. The operating ratio for the first three months was 81.40 per cent. An interesting feature of the situation at present is the favorable equipment condition, the percentage of locomotives held for repairs requiring over 24 hours as of May 1, 1923, being 16.5, and its bad order cars as of May 1, being 8.2 per cent. These figures are slightly above the objective set by the A. R. A. program to be reached on October 1, but they happen to be slightly better than the averages for the northwestern district.



*Gilliams Service*

**One of the New Locomotives for Austria's Electrification**

# Legal Questions in S. P. and Nickel Plate Cases

## New Law Regarding Consolidations and Control of One Road by Another Involves Argument

WASHINGTON, D. C.

TWO IMPORTANT and interesting questions as to the extent by which Congress intended to change by the enactment of the Transportation Act, the public policy in relation to consolidations or the acquisition of one railroad by another, figured in the day's news of May 31.

Solicitor General James M. Beck presented an argument on behalf of the government in the Southern Pacific-Central Pacific case before Circuit Judges Sanborn, Stone and Lewis at St. Paul, in which he asked the courts to decide whether the law of the land today is represented by the Sherman anti-trust act and the decision of the Supreme Court under that law that the Southern Pacific must give up its control of the Central Pacific, or whether it was within the intention of Congress that the effect of that law and the court's decision under it, which had not been made when the law was passed, might be nullified by a decision of the Interstate Commerce Commission under the Transportation Act authorizing the Southern Pacific to acquire control of the Central Pacific. On the same day the Interstate Commerce Commission announced that it will hear arguments on July 9 in the case involving the proposed consolidation of the Nickel Plate and Clover Leaf lines on the question whether a consolidation authorized under state laws and not prohibited by the federal anti-trust laws, because the roads are connecting and not competing, may be carried out without the specific authority of the commission granted after the formulation of its final consolidation plan, or whether Congress, by the Transportation Act, intended that complete control of consolidations should be in the hands of the commission.

At the same time the commission made public copies of a proposed report in the case by Examiner Boles, which it said was drawn up solely for the purpose of eliciting expressions regarding the legal questions presented and should not be interpreted as reflecting tentative conclusions of the commission, its Bureau of Finance or even of the examiner, taking the position that the application of the New York, Chicago & St. Louis for authority to issue $105,000,000 of stock in connection with the proposed consolidation with the Chicago & State Line; Lake Erie & Western; Fort Wayne, Cincinnati & Louisville, and the Toledo, St. Louis & Western, must be denied on the ground that the issue is not for a lawful object, since no authority to consolidate the property of these companies has been obtained under section 5 of the interstate commerce act. The report is based on the idea that Congress had intended to place complete control of consolidations in the hands of the commission and that it is not at liberty to permit consolidations in any other manner than that prescribed in the law, which contemplates approval by the commission of a consolidation provided for in the plan which it was directed in section 5 to formulate. Counsel for the Nickel Plate, as indicated in extracts from their brief published in last week's issue, had taken the position that the law was intended to remove restrictions against consolidation rather than to impose new ones, and that the consent of the commission was not required for a transaction which could have been made under the old laws.

### Solicitor General Asks Courts to Decide

The arguments at St. Paul were on the application of the United States for a final decree under the mandate issued by the Supreme Court following its decision of May 29, 1922, and on a petition filed by the Southern Pacific asking that the circuit judges now enter a decree which would permit the carrying into effect of the commission's decision under the new law. The railroad company was represented by J. P. Blair and C. A. Severance. Extracts from the argument of the solicitor general in the Southern Pacific case were given out at Washington by the Department of Justice, which apparently is not taking a strong position on either side but is merely asking the courts to decide.

In the last analysis, Mr. Beck said, the proceeding involves the integrity of the Sherman law. "If, in the enforcement of this famous rule of public policy, the action of the courts is subject to the revision of the Interstate Commerce Commission, then the Sherman anti-trust law, so far as the regulation of interstate transportation is concerned, has largely lost its efficacy and there would seem to be little use in the future of any effort by the government to enforce its provisions in the judicial department of the government when under the interpretation now sought to be given to the transportation act the real court of last resort is an administrative commission.

"It may be that Congress intended such a radical departure in a policy to which it has now tenaciously adhered for nearly 33 years, and it may also possibly be an act of wisdom to transfer the whole question of permissible monopolies or restraints of trade in interstate transportation from the rigid enforcement of the Sherman anti-trust law to the more elastic discretion of an administrative tribunal. The government, however, cannot assent to this view until the judiciary, as the final interpreter of the will of Congress, shall so declare."

The solicitor general said that the underlying question is the true will of Congress, and, whatever that will was, it is the wish of the Department of Justice to enforce it. He declared that the section of the transportation act in controversy contemplated that the power of the Interstate Commerce Commission was limited to the allowance of leases and consolidations when the principle of competition was fully recognized, and that it was, therefore, not the intention of Congress to destroy the underlying principle of the Sherman anti-trust law, which forbids the destruction of competition between competing carriers.

The solicitor general disclaimed any desire to impeach the wisdom of the Interstate Commerce Commission's order, saying:

"We recognize that the commission in this matter has acted from the highest motives and with a full belief in its legal power to make the order. It did so after a very patient hearing of the railroads involved and of the representatives of the states through whose territory these railroads pass. Possibly no hearing was ever given more care or was marked with a more scrupulous desire to hear all the testimony that could be adduced.

"The United States was not a party to that hearing. While the Department of Justice was given full opportunity to appear before the commission, yet we felt it inconsistent with our fidelity to the Supreme Court to appear before an administrative tribunal, and reargue the merits of the Southern Pacific's control of the Central Pacific. We recognize, moreover, that, after a full and patient hearing, the commission made an order which contains many constructive features of undoubted value. It may be true that the practical wisdom of that order is vindicated by the very general satisfaction with which it has been apparently received in

the great section of the country through which the railroads pass. Upon the wisdom of the commission's order I express no opinion. If it has the legal power to substitute its judgment as to what the interests of that section and of the entire nation require for the judgment of the Supreme Court, then we do not question in this proceeding the constructive value of its order. It is solely a question of power and the general policy of railway consolidation is not involved in this case.

"It may well be that this carefully prepared and very able order of the commission is a wise and beneficial adjustment of a problem which for more than a generation has vexed the government and the states more immediately affected.

"It may well be that the settlement proposed by the commission, which has, at least for the time being, harmonized the long-standing differences of great transcontinental carriers, will better subserve the public interests than the absolute divorce which the Supreme Court, enforcing the Sherman law, has decreed."

Nevertheless, the question remained, he said, whether after the Supreme Court had adjudged that the control of the Central Pacific by the Southern Pacific was unlawful as destructive of competition, the commission could disregard such finding and declare otherwise. The solicitor general added that Attorney General Daugherty, with great respect for both the Supreme Court of the United States and the Interstate Commerce Commission, simply asked that the court carry into effect whatever it regards as the true will of Congress.

### Nickel Plate Consolidation May Have to Await Completed Plan

The Southern Pacific case differs from the Nickel Plate case in that it does not go to the extent of technical consolidation at this time, but merely involves the acquisition of control, and the commission's permission to the Southern Pacific is conditioned upon a possible rearrangement of the roads in the final consolidation plan. If the position taken in the proposed report in the Nickel Plate case should be adopted by the commission, the consummation of the Nickel Plate consolidation would have to await the completion of the final plan which it is now expected may be promulgated some time this fall. The consolidation which the Nickel Plate is now ready to consummate is not inconsistent with the commission's tentative plan but it is well understood that the Nickel Plate also has ambitions to include the Chesapeake & Ohio and that would not be in accordance with the plan. Also the commission might want to use the lines involved in some other way in working out its final plan. It is probable that any interval between a decision in the Nickel Plate case and the issuance of the final plan may be occupied by litigation and similarly the Southern Pacific case is expected to get to the Supreme Court before it is finally decided.

The New York, Chicago & St. Louis had applied for authority under section 20a (1) to issue presently 327,200 shares of 6 per cent cumulative preferred stock and 462,479 shares of common stock in exchange for all the issued capital stock of the New York, Chicago & St. Louis, the Chicago & State Line, the Lake Erie & Western, the Fort Wayne, Cincinnati & Louisville, and the Toledo, St. Louis & Western; and (2) to nominally issue 131,600 shares of preferred stock and 133,721 shares of common stock, to sell said stock or parts thereof from time to time at not less than par and to use the proceeds from any such sale for its capital corporate purposes. Specific authority was also requested with respect to the disposition of parts of the preferred and common stock first mentioned. The applicant also asked for a certificate under paragraph (18) of section 1 of the interstate commerce act that the public convenience and necessity require the acquisition and operation by it of the lines of railroad now owned by the constituent companies and operated in part by the Nickel Plate and in part by the Clover Leaf.

A hearing was held upon the application on May 15. There was no appearance in opposition to the granting of the authority sought and no objections to the granting of the application have been presented to the commission by any state authority. Objections were made prior to the hearing by certain minority stockholders of the Nickel Plate and of the Clover Leaf which, the report says, were not deemed necessary to be considered in the disposition of the application.

The applicant represented that it is a consolidated corporation created and existing under the laws of the states of New York, Pennsylvania, Ohio, Indiana and Illinois for the purpose of acquiring the property, rights and franchises of the constituent companies and of operating the properties in intrastate and interstate commerce. The constituent companies have united in an agreement and articles of consolidation pursuant to the laws of the states named. The agreement and articles of consolidation have been duly made, executed and filed pursuant to, and in accordance with, the statutes of the several states applicable thereto and have been duly approved by the Public Service Commission of New York, the Public Service Commission of Pennsylvania and the Illinois Commerce Commission. Under the laws of Indiana no approval of the public service commission is required and under the laws of Ohio no approval by the public utilities commission is required. It also appeared that all things necessary to the completion and consummation of the consolidation, so far as the laws of several states in which it proposes to operate are concerned, have been done and effected. The constituent companies are included in the Nickel Plate-Lehigh Valley system in the grouping of roads under the tentative plan for consolidation of railroad properties promulgated by the Interstate Commerce Commission under date of August 3, 1921.

By the agreement and articles of consolidation, it is provided that the amount of the applicant's capital stock shall be $105,500,000 (the aggregate amount of the authorized capital stock of the constituent companies); that 327,200 shares of preferred stock, and 462,479 shares of common stock, shall be immediately issued in exchange for the issued capital stock of the constituent companies on the several bases set forth in the agreement and articles of consolidation; and that the remainder of the authorized capital stock, consisting of 131,600 shares of preferred stock and 133,761 shares of common stock may be issued from time to time when authorized by the applicant's board of directors.

### Proposed Report Put Out to Elicit Argument

At the outset, the report says, the commission must find, as a prerequisite to the granting of the authority sought by the applicant, that the proposed issue "is for some lawful object within its corporate purposes."

"It appears that the consolidation by the constituent companies of their properties into one corporation for the ownership, management and operation of the properties is within the corporate powers of the constituent companies and may lawfully be accomplished under the laws of the several states creating them. It also appears that the acquisition and operation of the properties of the several constituent companies are within the corporate powers conferred upon the applicant by the laws of the states in which it proposes to operate. The consolidation of their properties by the constituent companies and the acquisition of the properties of the constituent companies by the applicant are not within the prohibition of the anti-trust laws, for the constituent companies do not compete and are connecting lines. Moreover, the Nickel Plate, the State Line, the Lake Erie, and the Fort Wayne are under common control and management. All that remains to be done to effectuate the agreement of consolidation is for the applicant to issue its capital stock in exchange for the capital stock of the constituent companies. The object, therefore, to be accomplished through the pro-

posed issue of stock is the consummation of the consolidation of the constituent companies.

"The constituent companies have not sought authority for the consolidation of their properties under section 5. The immediate question, therefore, is whether the transaction can lawfully be consummated without such authorization. Two constructions of the above quoted provisions of the section are possible: One interpretation is that they represent an attempt on the part of Congress to place in our hands the complete control over the union of carriers engaged in interstate commerce; the other is that they are merely a means of affording relief from the operation of the anti-trust laws or other restraining state or federal statutes.

"Paragraph (6) contains no specific probihition, for while it specifies the condition under which consolidations shall be lawful it does not in terms state the conditions under which they shall be unlawful."

After quoting from section 5 of the act and from the report of the House conferees and remarks by Senator Cummins and Representative Esch regarding the purpose of the provisions relating to consolidation which were put into the transportation act the report continues:

"Obviously, the preparation and adoption of a plan of consolidation under such instructions from Congress require deliberate and careful consideration of every railway property of the continental United States from competitive, financial, commercial and other points of view, so that each such property may with nicety be fitted into its appropriate place in the final scheme. Obviously, also, many consolidations which are not barred by the restraining provisions of the anti-trust laws or other federal or state statutes may be wholly inconsistent with the plan and destructive of its purpose. Yet, if consolidations of this kind can now be lawfully effected without our approval, the conclusion is inevitable that the carrier may ignore section 5 with impunity under similar circumstances, after the plan has finally been adopted, and thus bring quick disaster to its entire structure. It is impossible to believe that it was the intent of Congress to prescribe with such care the method by which this elaborate and comprehensive program shall be formulated and the principles by which it shall be governed, and at the same time leave open a door by which at any time it may be wrecked.

"Beyond question, in the development of the transportation act, 1920, as a constructive measure for the solution of the railroad problem, great importance was attached by Congress to the ultimate consolidation of the carriers into a limited number of great systems, well balanced financially and of similar earning power, but competing with each other and maintaining the existing channels of trade and commerce. In our opinion it was the intent of Congress that complete control over the situation should be in our hands, so that the working out of this constructive policy might be safeguarded in every possible way, and so that consolidations or other union of interests might not be effected without our consent.

"When, in paragraph (6), it is provided that it shall be lawful to consolidate under certain conditions, this is but another way of saying that consolidations in disregard of those conditions shall be unlawful.

"If it had been intended that these provisions of section 5 should merely afford a means of escaping from the restraints of the anti-trust laws and other state or federal statutes, much simpler machinery would have been devised for accomplishing the purpose. The plan of consolidation is incompatible with such an interpretation of the section and embodies a policy of far greater breadth and vision.

"It being, as we find, the intent of Congress that complete control of consolidations should be in our hands, and Congress having prescribed the manner in which such consolidations are to be effected, we are not at liberty to permit consolidations in any other manner. The fact that the consolidation to be effectuated through the proposed issue of capital stock and the proposed acquisition of the properties of the constituent companies by the applicant is in harmony with our tentative plan, does not relieve us of the duty imposed by the provisions in question to proceed in the manner prescribed.

"We conclude and find, therefore, that the proposed issue of capital stock is for an object; namely, the consummation by the applicant and its constituent companies of the consolidation into one corporation for ownership, management and operation of properties heretofore in separate ownership, management and operation, which cannot be lawfully accomplished without our authority under the provisions of section 5 of the interstate commerce act. Until such authority is secured, the application to issue capital stock must be denied. This conclusion makes it unnecessary to consider in other respects the propriety of the proposed issue.

"As the lines of railroad which the applicant proposes to acquire and operate were in operation in interstate commerce prior to the effective date of paragraph 18 of section 1 of the interstate commerce act, in our opinion the proposals do not fall within prohibition of that paragraph. The proceedings under the provisions of this section of the act will accordingly be dismissed."

The Nickel Plate case thus far affords a striking illustration of the difference between the law as it was passed and the provision relating to consolidations which was proposed in the House bill, which permitted consolidations, mergers and pooling of earnings or facilities subject to the approval of the commission and declared that carriers affected by such order of the commission should be relieved from the operation of the anti-trust and other restrictive or prohibitory laws. While the provisions of the transportation act have permitted several important steps in the direction of consolidation, as under it the commission has authorized several large systems to bring subsidiary lines into closer relation by lease and in several cases it has permitted one road to acquire control of another, it has undoubtedly caused a great deal of delay as to several consolidations which might have been accomplished by this time if something like the provisions of the House bill had been adopted.

*Copyright by Underwood & Underwood, N. Y.*

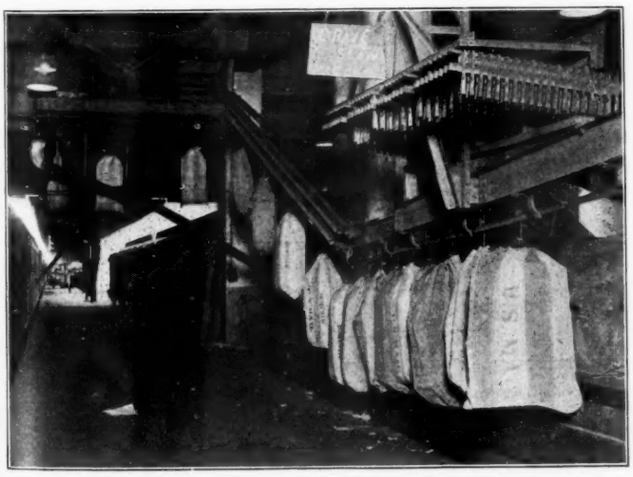
**Governor Mabey of Utah Advancing to Drive Golden Spike in Recently Completed U. P. Line at Fillmore, Utah**

# New Mail Handling Device at Chicago Mail Terminal

THE CHICAGO UNION STATION COMPANY, in equipping its great mail terminal at the south end of the station, gave considerable study to the method of loading outbound mail. This constitutes about 60 per cent of the business, at this terminal or almost 1,000 tons daily, and if

**The Mail Sacks Are Hung on the Trolley from the Loading Dock at the Foot of the Spiral Chute**

handled manually by loading and unloading from trucks would constitute a very serious operating expense. While over eight miles of conveying belts have been installed in the upper floors of the terminal, for classifying and conveying mail, there are several objections to the application of

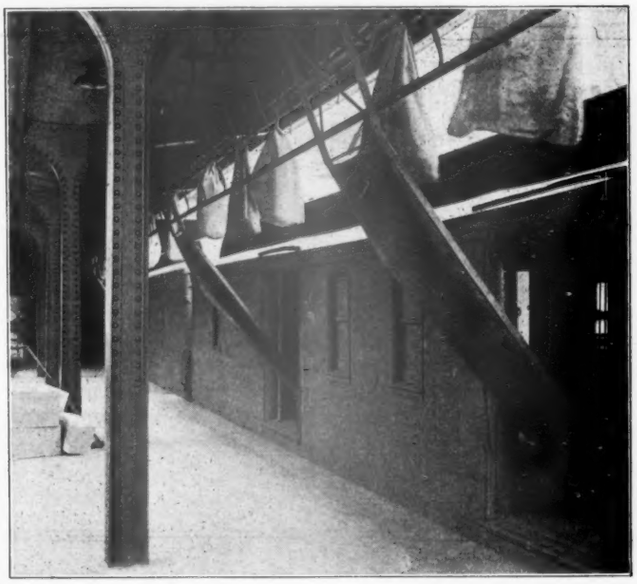


**The Returning Trolleys Are Dropped into the Chute at the Left from Which They Are Returned by Hand to the Rack on the Right**

belts to outbound mail at the track level where such mail is received on platforms by the station company. Here the mail is received in sacks by chutes from the upper floors and separations have to be made by the railroad forces for the individual mail cars in which the mail is to be forwarded. In using any mechanical system track platforms have to be kept clear at all times for such registered and other mail as must be handled by an attendant, and the necessary overhead clearance for trucks must always be maintained.

In an endeavor to meet the situation the Union Station Company made an appropriation for a unique overhead installation which, while now serving a platform length capable of accommodating only four cars and constructed only by way of experiment, has demonstrated both remarkable labor saving possibilities, and a particular adaptibility to the purpose, and will probably be extended to handle all outbound cars at this terminal.

The system comprises an overhead conveyor, whereby mail sacks are transported from a loading dock at the foot of the chutes to a string of mail cars and deposited into cars through any one of eight doors with the aid of a selective tripping device. It consists of a cold rolled bar 1½ in. by ½ in. in section, rounded on the top edge so as to serve as the running rail for the trolleys from which the mail sacks are suspended. At the loading platform, or dock, where the sacks are received from spiral chutes communicating with upper floors of the terminal building, this rail is placed at a sufficient pitch to permit of gravity operation. This is clearly shown in one of the photographs. Throughout the remaining portion of the track, including the incline for elevating the sacks from the low level of the platform to the



**A Selective Tripping Device Causes the Trolleys to Drop the Sacks into Chutes at Designated Car Doors**

overhead position alongside the cars, the trolleys are moved with the aid of an endless chain of a 1¼ in. by ½ in. diamond pattern with ⅝-in. rollers. This chain travels at a speed of 200 ft. per min. and is equipped with lugs at intervals of 5 ft. for pushing the trolleys so that the full capacity of the equipment is 40 sacks per minute or 2,400 sacks per hour.

The selective feature, whereby the sacks can be hung on the trolleys at the loading dock, and be delivered automatically to any designated car door, is accomplished through an ingenious design of trolley. These trolleys consist of small bronze castings equipped at the upper end with a trolley wheel, 1 15/16 in. in diameter, having a groove 1 5/16 in. deep, while at the bottom there is a hook from which the mail sack is hung by its tying cord, as seen in the photographs. This hook is mounted on a pin so that it may be tripped to release the sack whenever a projecting finger on the side of the trolley frame meets with an obstruction in the course of its travel along the rail. This obstruction is introduced in the form of a portable tripping device which can be mounted on the trolley rail at any point in its

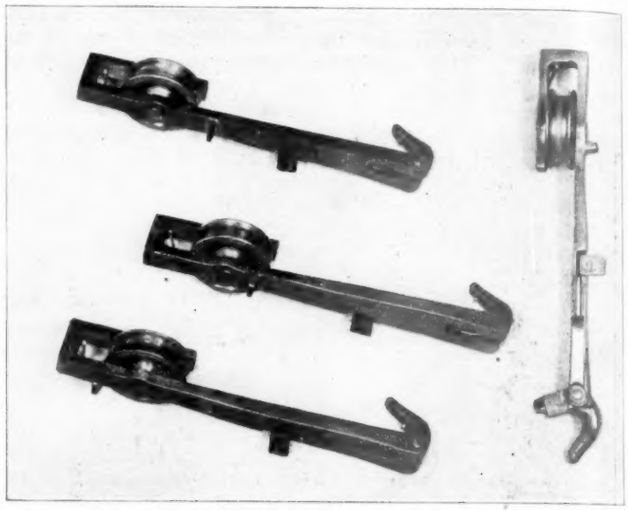
length. These trippers operate by engaging the finger on the trolley, which releases the hook that holds the sack, but the tripper is ineffective unless it is actuated by a lug projecting from one side of the trolley frame, and the position of this lug relative to the top of the trolley frame, affords the selective feature of this mail-handling equipment. There are as many different positions of this lug, as there are trippers and each tripper is designed so as to be operated by only one position of the lug. In the installation now in use at the railway mail terminal, there are eight selections in all, but the system may readily be extended so as to provide for many more.

After the hook has been tripped, or when the trolley reaches the end of its travel on the track, it is returned on the reverse leg of the endless chain, to a point near the initial end where another type of tripper kicks the trolley off of the chain and drops it into a chute in which it slides into a receptacle on the loading platform. From this, the trolleys are returned by hand to the racks convenient to the loading car platform for reuse.

Sacks dropped off the trolley through the agency of the tripping device, are delivered into the car door through the aid of sheet metal chutes made of No. 12 gage steel and supported by hooks from a rail attached to the platform canopy. These chutes are readily placed at any position along the platform, and when not in use can be nested in a vertical position in the plane of the canopy columns where they offer no obstruction to the use of the platform. It is to be noted in this connection, that these chutes, together with the tripping devices are quickly moved to any position of the car doors, so that it is not necessary to spot the cars in order to make the conveyor system operative.

Experience with the conveyor system indicates that a man can readily hang four sacks per minute, on the trolleys, or double the number ordinarily loaded on trucks in the same time but aside from the halving of this portion of the handling cost, the conveyor eliminates entirely the labor of trucking the loaded sacks to the car door and of unloading them into the car. The use of this system has also demonstrated that the cords provided for the mail sacks are amply strong to serve as hangers for the sacks as suspended from the trolleys as no trouble with breakage of these cords has been experienced.

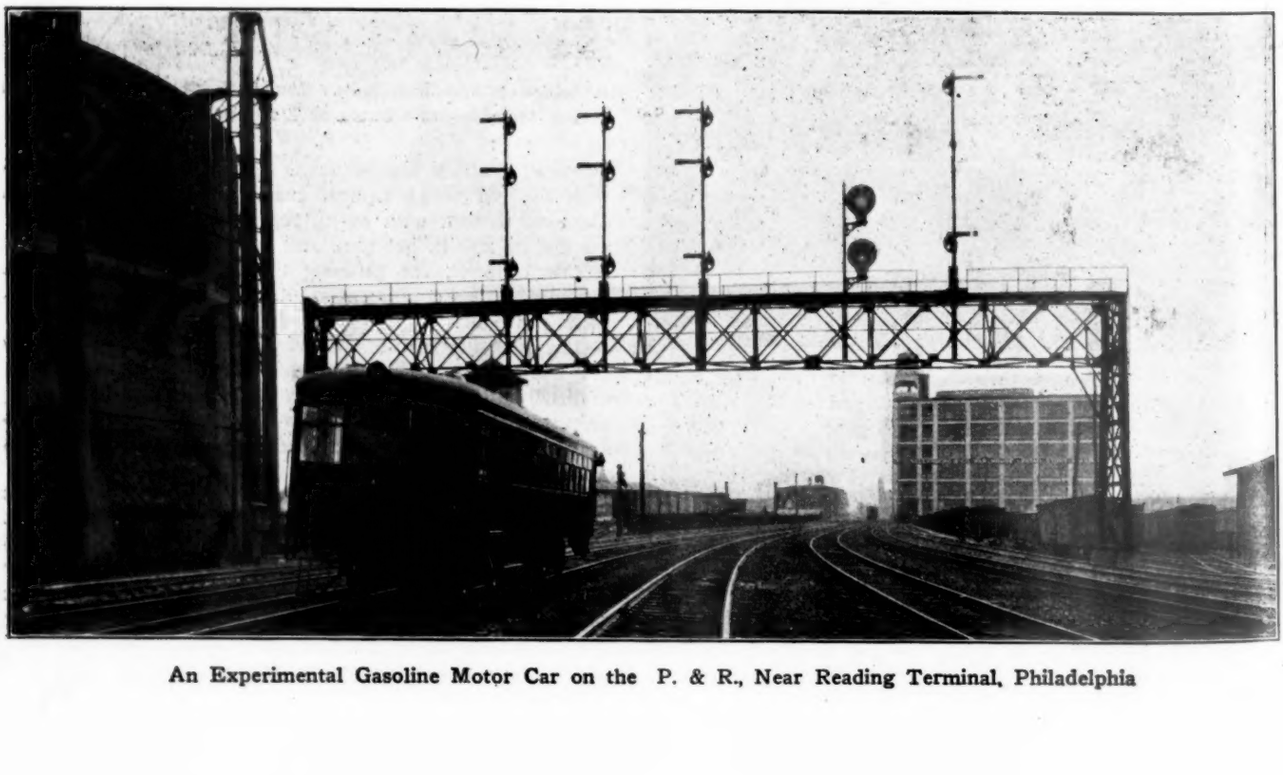
This conveyor system has been installed by the Allbright-Nell Company, Chicago, under the direction of J. D'Esposito, chief engineer of the Chicago Union Station Company. The actual development of the equipment has been carried out by J. H. Schaefer, representing the Allbright-Nell Company, and A. S. Holmes, assistant to the chief engineer of the Chicago Union Station Company.



**The Trolleys. Note the Different Positions of the Actuating Lugs on the Three Trolleys at the Left.**

---

THE POSTAL TELEGRAPH COMPANY announces the completion of an exclusive agreement with the Canadian Pacific Railway for the interchange of telegraph traffic, the agreement to run for 10 years.



**An Experimental Gasoline Motor Car on the P. & R., Near Reading Terminal, Philadelphia**

# General News Department

**The bridge** across Cimarron River on the Atchison, Topeka & Santa Fe, a few miles north of Guthrie, Okla., was partly destroyed by fire on June 5 and trains had to be detoured by way of Ripley, Okla., and Skedee, for some time; the cause being the derailment of a freight train and the wreck of 16 cars of oil, which fell into the river.

**The American Boiler Manufacturers' Association** at its annual convention at Hot Springs, Va., this week, unanimously adopted the following resolution offered by W. H. S. Bateman, of the Parkesburg Iron Company. *Resolved,* That this Association go on record in upholding the railroads of the United States in the fight which they are making for their very existence, and that we as a body emphatically are opposed to Government ownership; and will use our best efforts individually to encourage public sentiment in sympathy with the railroads, and will at all times endeavor to counteract the influences which are constantly working in opposition to the railroads of our country.

## New Design of Lock Lifter for Type D Coupler

Trouble has occasionally been experienced with the A. R. A. Type D coupler on account of the lock lifter working out of place and making the coupler inoperative. In order to overcome this difficulty, the Committee on Couplers and Draft Gear of the Mechanical Division has modified the design of the lifter slightly. The modified lifter is interchangeable with the present design and all lifters manufactured in the future will be of the modified type, designated as D coupler lock lifter No. 2.

## Consolidation Hearings

The Interstate Commerce Commission has announced that hearings on its consolidation plan will be resumed before Commissioner Hall at Chicago on June 18; Buffalo, June 21; Philadelphia, June 22, and New York, June 25, to give an opportunity for the presentation of evidence by those carriers which did not do so at the recent Washington hearing and also to accommodate state commissions, communities interested, short lines affected, or any others who have any substantial interest in the matter. Notice of time and place for a hearing in New England was deferred.

## Extension of Time for Completion of St. John-Quebec Railway

A resolution has been passed by the Canadian House of Commons extending the time for the completion of the St. John-Quebec Railway between Centreville, N. B., and Andover, until December 31, 1925. This railway is partially completed. It is owned by the Province of New Brunswick and the line in operation is operated by the Canadian National. It was pointed out in a discussion in Parliament that the completion of this road would give the Canadian National a shorter route from Montreal to St. John than it now has from Montreal to Portland, Me.

## Baggage Agents Meet

The American Association of Baggage Agents held its annual convention at Signal Mountain hotel, Chattanooga, Tenn., on May 9, 10 and 11, with an attendance of approximately 90 per cent of its members. The convention directed its attention to the promotion of the uniformity of baggage rules, uniform practices and regulations governing claims, uniformity of baggage checks, the standardization of baggage forms and the more efficient handling of railroad business mail in interline baggage service. The convention agreed to continue the "right-way" baggage campaign, the purpose of which is to educate the public in the proper selection of baggage receptacles. Newspaper transportation and the free baggage allowance were considered.

The following officers were elected for the coming year: President, H. M. Wade, general baggage, mail and express agent of the Erie, New York; vice-president, C. A. Searle, manager mail, baggage and express traffic of the Chicago, Rock Island & Pacific, Chicago; secretary and treasurer, E. L. Duncan, manager mail and baggage traffic, Chicago & Eastern Illinois, Chicago. The next meeting will be held on June 3, 1924, at Montreal, if proper arrangements can be made.

## Urge Early Decision in Los Angeles Terminal Case

The Railroad Commission of California has joined with the Atchison, Topeka & Santa Fe, the Southern Pacific and the Los Angeles & Salt Lake in petitioning the Supreme Court of California to call an immediate hearing of the Los Angeles union terminal and grade elimination case. The controversy is now on the October calendar of the court.

## Interim Meeting of Central Railway Club

The Central Railway Club will hold its second interim meeting and smoker at the New Hotel Statler, Buffalo, N. Y., on Thursday, June 14. There will be an informal address by G. L. Moore, engineer maintenance of way of the Lehigh Valley, on the subject of Economy and Efficiency in Maintenance of Way and the Method of Laying Rail and Cleaning Ballast with a Locomotive Crane. E. S. Jones, of the Boston & Maine, will give a lecture on New England scenery. Both lectures will be illustrated by motion pictures and lantern slides. The club announces its annual outing for Saturday, July 28, at Dold's Grove, Wheatfield, N. Y.

## Increases in Wages on Many Roads

The Rock Island Lines have increased the pay of track foremen by percentages amounting to from $2 to $8 a month; of mechanics in the roadway department, two cents an hour; and laborers, one cent an hour. The Pennsylvania Railroad has made an advance of two cents an hour in the wages of various classes of employees in the central region, including elevator operators, watchmen, freight-house laborers, store-house laborers, messengers, janitors and porters. At Gadsden, Ala., it is announced that the 700 employees of the Gadsden Car Works have gone to work, after a suspension of one week, under a new contract with their employers in which "all labor troubles have been smoothed over." Since the strike of last year, the men have been working without a general agreement.

The striking shopmen of the Central of New Jersey, of whom it is said that 1,200 have remained out, have at last announced that a formal vote has been taken to give up the strike. The shops at Elizabeth, N. J., were already well manned; but at Ashley, Pa., it is said that the break-up in the brotherhood will result in considerable numbers of men going to work in the shops.

The Southern Pacific has made a general increase in the wages of shopmen; skilled mechanics, 5 cents an hour; helpers, 2 cents an hour. The number of men affected is about 13,000; and they were represented in the negotiations by the officers of the Southern Pacific Shop Crafts' Protective Association, an organization confined to the employees of this road. The annual addition to the payrolls will be about $750,000.

The Chicago & Alton has denied a request of its clerks and freight handlers for an advance in wages. This follows a series of conferences with the Brotherhood of Railway and Steamship Clerks and Freight Handlers, and it is understood that the brotherhood will appeal to the United States Railroad Labor Board.

The Chesapeake & Ohio has increased the pay of shopmen 2

cents an hour. About 7,000 men are affected and the annual payrolls in this department will be increased about $590,000.

The Illinois Central has received an application from the Brotherhood of Railway and Steamship Clerks for increased pay for storekeepers and assistants; chief clerks and other supervisory clerical positions, 9 cents an hour; for clerks, 9 cents and in some cases 10½ cents an hour; for inexperienced clerks an initial salary of $77.50 a month, to be advanced $10 after six months; janitors and watchmen, 14 cents an hour; office boys and messengers, 9 cents; freight handlers, 8 cents; common laborers, 10½ cents; telephone operators, 10 cents.

The Railway Employees' Department of the American Federation of Labor is negotiating with the Chicago & North Western, the Chicago, Milwaukee & St. Paul and the Southern Railway for increases in the wages of shop craft employees on these roads, said to number 54,000 men. The A. F. of L. representatives also ask for time and one half for overtime and for Sunday work.

## Annual Meeting of A. S. C. E.

The American Society of Civil Engineers will hold its fifty-third annual convention at the Hotel Drake, Chicago, on July 11-13. The tentative program, insofar as it deals with railways, follows:

WEDNESDAY

JULY 11, MORNING SESSION

11.00—Some Phases of Present-Day Railroad Transportation. John W. Kendrick, Chicago, Consulting Engineer; Chairman, International-Great Northern.

11.30—Railroad Transportation as Related to National Development. John G. Sullivan, Winnipeg, Consulting Engineer; Past-President, American Railway Engineering Association; formerly Chief Engineer, Canadian Pacific.

11.45—Railroads—The Arteries of Commerce. James R. Bibbins, Washington, D. C., Consulting Engineer; recently, manager, Department of Transportation and Communication, Chamber of Commerce of the United States.

12.00—Railroad Development as Influenced by Governmental Co-operation. Edwin F. Wendt, Washington, D. C.; M. Am. Soc. C. E.; Consulting Engineer; Past-President, American Railway Engineering Association; formerly member Engineering Board, Interstate Commerce Commission.

12.15—Consolidation of Railroads. I—Charles A. Morse, Chicago, Ill.; M. Am. Soc. C. E.; President, Western Society of Engineers; Chief Engineer, Chicago, Rock Island and Pacific Railway; formerly assistant Director of Transportation, Federal Railroad Administration; Past-President, American Railway Engineering Association. II—John S. Worley, New York, N. Y.; Professor of Railroad Engineering, University of Michigan; formerly member, Engineering Board, Interstate Commerce Commission.

JULY 11, AFTERNOON SESSION

2.00 to 4.00—Inspection Trips. Trip to the New Union Station, including the Pennsylvania, the Chicago, Burlington & Quincy, and the Chicago & Alton Railroad freight stations and the United States Mail Terminal Building. This trip is arranged especially for railroad engineers, and will be under the direction of J. D'Esposito, M. W. S. E., Chief Engineer, Chicago Union Station Company.

THURSDAY

JULY 12, MORNING SESSION

10.00—Introduction of the subject of railroad terminals, by H. R. Safford, Chicago, Vice-President, Chicago, Burlington & Quincy.

10.15—Principles of Terminal Station Design. Alfred Fellheimer, New York City.

10.30—The Railroad Freight Terminal Problem in St. Louis. Charles E. Smith, St. Louis; Consulting Engineer.

10.45—Street Development in Relation to Railroad Terminals. Jacob L. Crane, Jr., Chicago; Consulting Engineer.

11.00—Chicago Terminal Improvements, Illinois Central Railroad. Daniel J. Brumley, Chicago; Chief Engineer, Chicago Terminal Improvements, Illinois Central.

11.15—Chicago Terminal Improvements, Dearborn Station Group. Frederick E. Morrow, Chicago, Assistant Chief Engineer, Chicago & Western Indiana.

11.30—Chicago Terminal Improvements, Chicago, Rock Island & Pacific and New York Central. R. H. P. Ford, Chicago; Assistant Chief Engineer, Chicago, Rock Island & Pacific.

11.45—Chicago Union Station, Passenger and Mail Facilities. J. D'Esposito, Chicago; Chief Engineer, Chicago Union Station.

12.00—Relation of Rail and Water Terminals in the Chicago District. Rufus W. Putnam, Chicago; Major, Corps of Engineers, U. S. A.

12.15—Modern Freight Station of the Pennsylvania Railroad at Chicago. William L. R. Haines, Pittsburgh, Pa.; Assistant Engineer, Pennsylvania.

## Superintendents' Association

The American Association of Railroad Superintendents will hold its annual convention at Kansas City, Mo., next week, beginning on Wednesday, June 13. Headquarters will be at Hotel Muehlbach. At the banquet on Wednesday evening, there will be an address by President W. G. Bierd, of the Chicago & Alton, on the needs of American railroads and of the public served by them. Arrangements have been made for broadcasting the addresses on Tuesday evening from the radio station of the Kansas City Star, WDAF.

Others who will address the superintendents are W. M. Jeffers, general manager of the Union Pacific; M. J. Gormley, chairman of the car service division of the American Railway Association; Samuel O. Dunn, editor of the *Railway Age* and J. Marshall, special representative of the American Railway Association in the freight claim department.

Subjects to be reported on before the convention (which will continue through Thursday and Friday) are: Interchange car inspection; elimination of overs and shorts; yard operation; train rules; grade crossing protection; handling live stock; the continuous home route card.

## Roads in April Earning at Rate of 6½ Per Cent

Class I railroads of the United States in April had a net railway operating income of $83,197,800, which represented a return, on an annual basis, of 6½ per cent on their tentative valuation, according to reports filed by the carriers with the Interstate Commerce Commission. In April last year the same carriers had a net operating income of $49,979,000, which was equivalent to an annual return of 3.99 per cent. The net operating income in March was $83,487,000, or 5.96 per cent.

Operating revenues in April totaled $522,955,700, an increase of more than 25 per cent compared with the same month last year. Operating expenses totaled $403,869,000, which was an increase of more than 20 per cent over April last year.

This increase as compared with April last year, which was the first month of the miners' strike, was due to an increase in freight traffic transported in April this year, tentative reports indicating an increase of more than 55 per cent, measured in net ton-miles. With this 55 per cent increase in traffic, operating revenues of the railroads increased only 25 per cent, reflecting reductions in freight rates that have been made during the past year.

Class I railroads during the first four months this year had a net operating income totaling $266,246,000, which on an annual basis, would represent a return of 5.49 per cent. During the same period last year their net operating income was $210,842,900, or 4.44 per cent. Operating revenues for the four months period totaled $2,006,923,000, an increase of 18.80 per cent over the same period last year, while operating expenses totaled $1,606,142,000, or an increase of 18.15 per cent.

The Class I carriers in the Eastern district had a net operating income in April totaling $48,321,000, which was at the annual rate of return of 7.93 per cent on their tentative valuation. In April last year their net operating income was $26,293,205 or 4.42 per cent. Operating revenues for those roads amounted to $273,378,700, or an increase of 32.45 per cent over the same month last year, while operating expenses totaled $206,677,900, which was an increase of 24.46 per cent over April, 1922.

The net operating income for the carriers in the Southern district totaled $12,281,700, which would be at the annual rate of return of 7.18 per cent, while in April last year it was $9,722,000 or 5.81 per cent. Operating revenues totaled $69,284,000, or an increase of 20.36 per cent over the same month in 1922, while their operating expenses totaled $52,363,700, an increase of 19.38 per cent over April last year.

Reports for the carriers in the Western district, complete except the Duluth, Winnipeg & Pacific and the Wichita Falls & Northwestern, showed a net operating income in April of $22,595,000, which would be at the annual rate of return on their tentative valuation of 4.52 per cent. In April last year those carriers had a net operating income of $13,964,000, or 2.85 per cent. Operating revenues totaled $180,292,800, an increase of 17.81 per cent over April last year, while their operating expenses amounted to $144,827,600, or an increase of 14.60 per cent over the same month in 1922.

Twenty-nine railroads in April had operating deficits, of which 7 were in the Eastern, two in the Southern and 20 in the Western districts. In March 35 railroads had operating deficits. These figures are based on reports from 192 Class I railroads representing a total mileage of 235,130 miles.

# Traffic News

A conference of representatives of railroads, the governments of Alberta and Ontario and others interested in the shipment of coal from Alberta to Ontario will be held at Winnipeg this month to consider the development of coal mining in Alberta.

A consignment of 580 head of western Canadian cattle shipped from Winnipeg, Man., to Quebec over the northern direct route of the Canadian National by the United Grain Growers, Ltd., for export to the United Kingdom, completed the journey of 1,350 miles in 76 hours and 40 minutes, or at an average speed of 18 miles per hour. The time is 7 hours and 20 minutes less than the schedule prepared by the railroad.

The Canadian National heretofore selling no liquors on its trains, has taken out a license for the sale of wine and beer on the dining cars running between Montreal and Quebec. Newspaper accounts indicate that the past policy has resulted in a loss of traffic. Under the law of Quebec, a license of this kind, granted to a restaurant or dining car, stipulates that liquor is to be supplied only with meals.

## Conference on Waste in Transportation

A preliminary conference of carriers, shippers and others interested in the problem of reducing waste in transportation has been called by the Department of Commerce to be held on June 13 at Washington. The announcement says:

"The American Railway Association is working to reduce waste in freight transportation. The Car Service Division is promoting heavier loading of cars. A constructive movement to even out the distribution of commodities, to increase available storage capacity and to effect the means of moving as large a tonnage as possible before the seasonal crop movement commences has been instituted. The freight container bureau is promoting improved packing methods and more durable types of packing cases. The Department of Commerce is deeply interested in all activities leading to the elimination of waste, together with a more stable and even distribution of commodities and the subsequent conservation of capital, material, labor and time. The department offers the services of its division of simplified practice as a centralizing agency in bringing together all elements interested in such problems and supporting the recommendations of these interests when they shall mutually agree upon waste-elimination measures of benefit to all concerned.

"This conference is called at the request of the two branches of the A. R. A. mentioned for the purpose of presenting to shippers the A. R. A. recommendations and to promote most effectively the greatest transportation efficiency and results. It is hoped that out of this conference will come a definite plan of co-operative action which the Department of Commerce can endorse and support and which will result in a nation-wide support of a constructive economic program in co-operation with the American Railway Association, its regional advisory boards of shippers and trade organizations."

## Special Trains to Washington for Shriners

The movement of Shriners to the national conclave at Washington, D. C., made necessary the operation of a large number of special trains. The Baltimore & Ohio ran 21 special trains from Chicago, carrying 4,000 passengers from California, Iowa, Minnesota, South Dakota, Illinois, Nebraska, Wisconsin, Idaho and New Mexico. The Pennsylvania carried 900 shriners from Medinah Temple, Chicago, on four sections of the Manhattan Limited on June 3. This company ran a total of 17 specials from Chicago, of which six were loaded in Chicago and vicinity and 11 came from western states. These trains carried approximately 3,000 passengers. The Chicago & North Western brought to Chicago 4,000 passengers on 11 special trains; these came from California, Washington, Oregon, Minnesota, Wisconsin and Iowa. The Chicago, Milwaukee & St. Paul operated five special trains carrying 700 passengers from Washington, Montana, South Dakota and Iowa.

# Commission and Court News

## Court News

### Not Liable for Violation of 28-Hour Act By Preceding Carrier

The Circuit Court of Appeals, Fifth Circuit, holds that a connecting carrier is not liable under the 28-hour law for a violation of the statute by the carrier from which it receives the shipment; and this applies in the case of an arrangement between the carriers by which one railroad, which owns stockyards and does the switching therein, retains control of shipments until moved from the yards and delivered to the connecting carrier.—Baker v. United States, 284 Fed. 818.

### Presumption That Automobile Driver Will Not Try to Cross Track Ahead of a Train

In an action for the death of an automobilist at a crossing, the Texas Court of Civil Appeals holds that the engineman had the right to presume that the automobilist in approaching the track, where his view was unobstructed, would not attempt to cross in front of and in close proximity to the rapidly approaching train, and no duty rested on him to anticipate danger to the automobilist until he tried [recklessly] to make the crossing.—G. H. & H. v. Sloman (Tex.), 244 S. W. 268.

### Railroad Not Liable for Death of Trackman by Train on a Crossing Railroad

A trackman who is struck by a train easily discernible on a crossing railroad while walking along the track carrying some tools after his work at the intersection was completed, is not within the rule requiring the railroad company to guard its employees from extraordinary dangers not readily discoverable; and a verdict for defendant in an action for his death, for lack of proof of actionable negligence, was held proper by the Circuit Court of Appeals, Sixth Circuit.—Prettyman v. Pennsylvania, 284 Fed. 562.

### Hours of Service Act—Employee Riding D. H. Not on Duty

An employee, A., at 7:45 a. m. took a helper engine from the roundhouse and at 8:15 a. m. handed it over, half a mile away, at Wenatchee, Wash., to the crew of a freight train, who took it to Quincy, 36 miles distant, arriving there at 2:45 p. m. From there A took it to the roundhouse. The Circuit Court of Appeals, Ninth Circuit, holds that between 8:15 a. m. and 2:45 p. m., A., while riding deadhead in the caboose, was not on duty, within section 2 of the Hours of Service Act.—U. S. v. G. N., 285 Fed. 152.

### Distribution of Coal Cars Not Affected by Special Service Order No. 25

The federal district court for the Northern District of Ohio holds that paragraph 12, § 1, of the Interstate Commerce Act, as amended by the Transportation Act, directing the carrier to count every car furnished to or used by any coal mine, must be read in connection with other language in the paragraph, directing every carrier to make just and reasonable distribution of cars and to maintain reasonable ratings. Whether a carrier's method of car distribution is unfair is a question in the first instance for the Interstate Commerce Commission, and the courts will not interfere by preliminary injunction unless the coal company's right is reasonably clear and free from doubt.

Service Order No. 23, of July 25, 1922, was superseded by Service Order No. 25, September 20, 1922. The latter leaves the assigned car practice and the question of the proper distribution of coal cars just where paragraph 12, §1, and the previous practice and decisions approving it, have placed it.—Cleveland & Western Coal Co. v. Baltimore & Ohio, 283 Fed. 995.

# Foreign Railway News

### British Control of Existing Railways in Anatolia

A group of bankers, mostly British, consisting of the Rothschilds, the Schroeders, and the National Provincial, Westminster and Lloyds Banks, each with equal voting powers, has acquired control of the Anatolian Railway, the Haidar Pasha Port Company and the Mersina-Tarsus-Adana Railway, according to the Times (London). The group is already closely associated with the Smyrna-Aidin Railway, which gives it dominance over the major part of existing railway mileage in the country.

### New East-West Railway in China

Fifty million francs (about $2,770,000 at the present rate of exchange) of new capital is being issued in Belgium for the Lung-Hai Railway, and a Dutch syndicate also is advancing 10,000,000 guldens ($3,914,000 at the present rate of exchange), according to the Times (London). These funds will permit the completion of the railway from Hsuchowfu to Haichow, which latter is on the coast. The railway is also being extended westward to Shenchow on the Yellow river. The line from Shenchow to Haichow when completed will be 750 miles in length, the longest east-west line in China. A further westward extension of 2,000 miles is contemplated.

### Retirement of Noted British Signal Engineer

A. T. Blackall, signal and telegraph engineer of the Great Western Railway of England, has retired, and is succeeded by R. J. S. Insell, chief assistant for the past 20 years. Mr. Blackall may be called the leading signal engineer of England, and his administration of the department has been marked by a progressive policy in all directions; and also by many inventions. The automatic train control system now in use extensively on that road is a development from the well-known cab signal, which was first introduced on the Fairford Branch about 1907. Mr. Blackall succeeded his father; and the two—father and son—have been at the head of the signal department of this railroad for about 50 years.

---

THE NUMBER of vessels passing through the Panama Canal in May was 419, the largest monthly movement on record; the tolls collected amounted to $1,972,000.

*International*

**Train Wrecked by Chinese Bandit Gang Whose Action in Holding Foreigners Taken from This Train for Ransom Startled World**

# Equipment and Supplies

## Locomotives

THE CENTRAL JARONU, Cuba, has ordered one 4-6-0 type locomotive from the Baldwin Locomotive Works.

THE CENTRAL NATIVIDAD, Cuba, has ordered one 0-4-2 type locomotive from the Baldwin Locomotive Works.

THE CHOSEN RAILWAY has ordered 6 Pacific type locomotives from the Kawasaki Shipbuilding yards at Kobe, Japan.

THE CENTRAL VERMONT has ordered 16 Consolidation type and 8, 0-8-0 type switching locomotives from the American Locomotive Company.

THE MAGNOLIA PETROLEUM COMPANY, Dallas, Texas, has ordered one 0-6-0 switching type locomotive from the Baldwin Locomotive Works.

THE GRAND TRUNK has ordered 5 Pacific type locomotives, 10 Mikado type and 5, 0-8-0 type switching locomotives from the American Locomotive Company.

THE TENNESSEE CENTRAL has ordered four Mikado type locomotives from the American Locomotive Company. These locomotives will have 25 by 30 in. cylinders, a total weight in working order of 275,000 lb., and a tractive effort of 54,500 lb.

## Freight Cars

THE GENERAL ELECTRIC COMPANY is inquiring for 3 flat cars of 30 tons' capacity.

THE CHICAGO, MILWAUKEE & ST. PAUL is inquiring for 500 steel underframes.

THE CHINO COPPER COMPANY has ordered 20 air dump cars from the National Steel Car Corporation.

THE UTAH COPPER COMPANY has ordered 6 caboose cars and 4 work cars from the Magor Car Corporation.

THE WESTERN MARYLAND will rebuild 2,000 steel hopper coal cars of 50 tons' capacity in its shops at Baltimore, Md.

THE KNICKERBOCKER FUEL COMPANY, 1 Broadway, New York City, is inquiring for 200 gondola cars of 70 tons' capacity.

THE WEST INDIA SUGAR FINANCE CORPORATION has ordered 160 cane cars of 30 tons' capacity from the Magor Car Corporation.

THE NEW HAVEN GAS LIGHT COMPANY has ordered two tank cars of 10,000 gal. capacity from the Standard Tank Car Company.

THE SOUTH AFRICAN RAILWAYS are inquiring through the car builders, for from 100 to 500 steel grain cars, of 40 tons' capacity.

THE PHELPS DODGE CORPORATION, reported in the *Railway Age* of May 19 as inquiring for 66 concentrate cars of 60 tons' capacity, has ordered these cars from the Mt. Vernon Car Manufacturing Company.

THE CHICAGO, BURLINGTON & QUINCY, reported in the *Railway Age* of May 19 as inquiring for repairs on from 600 to 800 coal cars, has placed an order with the Pullman Company for repairs on 600 cars.

THE FORD MOTOR COMPANY, reported in the *Railway Age* of April 7 as inquiring for from 1,000 to 3,000 automobile box cars of 40 tons' capacity, has ordered 1,000 box cars from the Standard Tank Car Company.

## Iron and Steel

THE NEW YORK CENTRAL is inquiring for 200 tons of steel for bridges.

THE BALTIMORE & OHIO is inquiring for 250 tons of steel for bridges.

THE BOSTON & MAINE is inquiring for 150 tons of steel for bridge work in Maine.

THE SOUTHERN PACIFIC is reported to be in the market for 50,000 tons of steel rail.

THE PENNSYLVANIA has ordered 10,000 tons of steel rail from the Carnegie Steel Company.

THE DELAWARE & HUDSON is inquiring for from 700 to 800 tons of bridge steel to rebuild the present bridge at Troy, N. Y.

THE TENNESSEE CENTRAL has given an order for 3,000 tons of 80 lb. rail to be delivered in August to the Tennessee Coal, Iron & Railroad Company.

THE MISSOURI PACIFIC has ordered 175 tons of structural steel, consisting of one five-panel through riveted truss span, from the Virginia Bridge & Iron Company.

THE NEW YORK CENTRAL, reported in the *Railway Age* of May 19 as inquiring for 175,000 tons of open hearth steel rail, has placed orders for 150,000 tons as follows: Bethlehem Steel Co., 67,500; Illinois Steel Co., 57,100; Carnegie Steel Co., 13,350; Inland Steel Co., 12,050.

## Machinery and Tools

THE SOUTHERN PACIFIC has placed an order for a 40-ton crane.

THE MICHIGAN CENTRAL has placed an order for a 6-ft. radial drill.

THE PULLMAN COMPANY has ordered two 48-in. car wheel borers.

THE NEW YORK, NEW HAVEN & HARTFORD has placed an order for a 36-in. planer.

THE MISSOURI PACIFIC has ordered one 200-ton transfer table and one 15-ton electric crane from the Whiting Corporation.

THE TENNESSEE CENTRAL expects to place an order soon for additional machinery, including an air compressor, wheel lathe, taper, boring mill, etc.

THE CENTRAL OF NEW JERSEY has placed an order for a 6-ft. radial drill. This company also ordered two 4-ft. radial drills from Joseph T. Ryerson & Son, Inc.

THE NORFOLK & WESTERN received bids recently for about 45 shop machine tools, including engine lathes, turret lathes, radial drills, boring mills, air compressors and shapers.

## Miscellaneous

THE CHICAGO & ALTON is inquiring for 350,000 ft. of yellow pine or Douglas fir siding, lining, decking and other freight car material.

THE NEW YORK CENTRAL will receive bids until 12 o'clock noon, June 11, for supplies, including track bolts, frogs, switches, splice bars, guard rails and steel work for bridges.

## Signaling

### Automatic Train Stops for Atlantic City Line

The Philadelphia & Reading has placed an order with the Union Switch and Signal Company for the complete installation of automatic train control of the continuous inductive type on the line from Camden, N. J., to Atlantic City, 55 miles double track. On this line there are several interlockings. Alternating current for the automatic train control will be superimposed on the 231 existing d. c. track circuits, and power will be transmitted at 550 volts, 60 cycles, single phase.

On this line the high speed Atlantic City and Sea Shore traffic during the summer season is very heavy and the high speed limit will be 90 miles an hour. Part of the line is used by trains of the Central of New Jersey from Jersey City to Atlantic City.

There will be 60 Reading locomotives equipped for the train control system.

# Supply Trade News

**Frank H. Clark,** who was president of the Elvin Mechanical Stoker Company in 1917 when the stoker was being developed, and who subsequently became vice-president of the Bradford Draft Gear Company, New York City, has been elected vice-president of the **Elvin Mechanical Stoker Company** in an executive and sales capacity, with headquarters in New York. Mr. Clark will remain also as a director and vice-president of the **Bradford Draft Gear Company.**

**The Truscon Steel Company** has increased its common stock from $4,000,000 to $4,500,000 and its preferred stock from $2,500,000 to $3,500,000, and is offering 100,000 shares of $10 par value common stock to its stockholders at $15 a share which will make a total of $4,200,000 in common stock outstanding. The dividend rate on the common stock has been increased from 7 per cent to 12 per cent. The funds derived from the sale of this additional stock will be used for extension and working capital.

**A. W. MacLaren,** general traffic manager of Morris & Company, with headquarters at Chicago, has been appointed vice-president in charge of sales of the **Chicago Bearing Metal Company,** with the same headquarters. He entered railway service in 1898 in the accounting department of the Cleveland, Cincinnati, Chicago & St. Louis, with headquarters at Cincinnati, Ohio, and in 1899 was promoted to chief clerk in the general passenger department, with the same headquarters, which position he held until 1902, when he was promoted to secretary to the president, with the same headquarters. In 1905, when the Cleveland, Cincinnati, Chicago & St. Louis was consolidated with the New York Central, he was promoted to assistant to the vice-president in charge of traffic of the New York Central lines, with headquarters at Chicago, and in 1907 was transferred to New York as assistant to the vice-president. He held this position until 1910, when he resigned to become general traffic manager of Morris & Company, with headquarters at Chicago, which position he has held until his recent appointment.

A. W. MacLaren

**The B. F. Sturtevant Company,** Hyde Park, Boston, Mass., has bought the plant of the Wisconsin Engine Company, makers of Corliss pumping engines at Corliss, Wisconsin. The new plant covers nearly ten acres and the buildings have approximately 150,000 ft. of floor space. A full manufacturing and engineering staff will be maintained and closer co-operation given to western customers. **Harry W. Page** has been appointed general manager and will be in charge of the Wisconsin plant. Mr. Page is a graduate of the University of Wisconsin, and for the past six years, has been assistant general manager at the main works of the B. F. Sturtevant Company, Hyde Park, Boston.

**The Surplus Steel Exchange, Inc.,** has been formed for the purpose of presenting an outlet for surplus stock material of steel products. A commission will be charged only on sales actually made, as the exchange will not buy material but act solely in the capacity of agent. The officers of the new company are: **Robert D. McCarter,** president; **George E.**

**Dix,** vice-president; **William L. Cooper,** treasurer, and **Edward Michaud,** secretary and general manager. The offices are at 7 Dey street, New York City. Robert D. McCarter is a partner of the firm of McCarter & Cooper, consulting engineers. He was formerly identified with the General Electric Company and the Westinghouse Companies, having been consulting engineer of the European Westinghouse Companies, and president of the Russian Westinghouse Electric Company. George E. Dix began his connection with the steel industry in 1907, with the Carnegie Steel Company, at the Waverly warehouses. He went to the Midvale Steel & Ordnance Company in 1916, as assistant to the general manager of sales, and during the last four years was with the Consolidated Steel Corporation as assistant to the vice-president. William L. Cooper was associated with the R. W. Hunt Company for fifteen years, having been European manager during a part of that time. He is a partner of McCarter & Cooper. Edward Michaud is an experienced steel man, having seen service with the Carnegie and Midvale Companies, and the Consolidated Steel Corporation.

**Harry D. Rohman,** formerly vice-president and chief engineer of the Stone-Franklin Company, New York, has become associated with Robert C. Shaal in the **R. C. S. Equipment Corporation,** a company dealing in general railroad supplies with offices at 8 East Forty-first street, New York City. Mr. Rohman is a graduate mechanical and electrical engineer with extensive railroad experience, having been prominently identified with the car lighting field and for several years was in close touch with railroad matters abroad. After graduating from the technical schools of Zurich, Switzerland, he entered the works of the Oerlikon Electrical Construction Company, and in 1903 qualified as an electrical engineer, with experience in high and low tension and a.c. and d.c. work, especially electric traction. Later he entered the service of J. Stone & Co., London, and in 1910 was appointed chief of the testing and experimental departments. In 1914 he was appointed chief assistant electrical engineer, and held that position until October 1, 1915, when he entered the service of the Franklin Railway Supply Company as chief electrical engineer. In 1919 he was appointed chief engineer of the Stone Franklin Company and later vice-president of the same company.

H. D. Rohman

## Obituary

**Clyde M. Carr,** retired president of Joseph T. Ryerson & Son, Inc., died on June 5 in Chicago after an illness of several weeks. A photograph of Mr. Carr and a sketch of his career appeared in the *Railway Age* of February 17, 1923, at the time Mr. Carr retired from the presidency of the company.

**John Edgar Rhodes,** for the last eight years secretary-manager of the Southern Pine Association, died on June 2 in Touro Infirmary, New Orleans, La., after an illness of about two months. He was born at Kent, Ohio, on July 9, 1874, and began his career in newspaper work. He subsequently served as private secretary to an officer of the Northern Pacific, secretary of the Minnesota Logging Company and then returned to newspaper work. In 1898 he was appointed secretary-manager of the Northern Pine Association. Ten years later he became connected with the Weyerhaeuser timber interests. In 1912 he became publisher and editor of the Tacoma (Washington) Tribune and when that paper was sold was appointed secretary-manager of the National Lumber Manufacturers' Association with headquarters in Chicago. Since 1915 he served as secretary-manager of the Southern Pine Association.

**Williard T. Sears,** research and experimental engineer of the Niles-Bement-Pond Company, New York, died recently at Montclair, N. J. Mr. Sears had been with the company for over twenty years. Prior to this he was connected with the Pennsylvania Steel Company for a number of years. He was a member of the class of 1887 of Massachusetts Institute of Technology. Mr. Sears was an inventor and developer of a number of machine tool devices.

**Elisha Hollingsworth Talbot,** founder of the original *Railway Age*, and for twelve years its active manager and publisher, died in New York City on May 22 at the advanced age of 83 years. He was born at McConnellsville, O., August 9, 1839, and was educated at Iowa State University. In early life he engaged in a great variety of literary, political and newspaper activities, being at one time secretary to United States Senator James Harlan and later to Congressman James F. Wilson. These activities covered some 20 years, 1855-1875, and included two years as a member of the Illinois legislature. He was admitted to the practice of law by the Supreme Court of Illinois in 1868. In 1876, after extended experience as a newspaper publisher and editor, Mr. Talbot established in Chicago a weekly publication devoted to railways—their financing, construction, operation, management and relations with their employees and the public. When this project took form in 1876, the mileage of railways in the United States was less than 75,000, while that in the states west of Chicago was less than 27,000. At that time the railways were incomplete, disjointed and engaged in destructive competition, and an era of insolvencies, foreclosures and amalgamations was at hand. It required courage to launch a railway publication in this new field at that time and vision to see the vast program of railway expansion which soon materialized. But Mr. Talbot had the courage and vision and found the necessary means and supporters. Under the name of the *Railway Age* his idea materialized into an aggressive publication with himself as president and manager and Horace R. Hobart as editor. Mr. Talbot retained control of the *Railway Age* until September 1, 1891, when he sold it to Harry P. Robinson and Hugh M. Wilson. Among the notable enterprises started by Mr. Talbot in connection with the *Railway Age* was the publication of the Biographical Directory of Railway Officials and the organization of the first extensive exposition of railway appliances in America, which was held at Chicago in 1883. Mr. Robinson, after a short time, sold out his interest and Mr. Wilson acquired full control; and, in 1908, sold the paper to the Railroad Gazette; and it was combined with the Gazette under the name of the Railroad Age Gazette. In 1910 the name was changed to Railway Age Gazette and in 1918 the present name, *Railway Age*, was adopted. Since retiring from railroad journalism, Mr. Talbot had been interested in various publications and had kept up his interest in Mexico, which began in the days of his early activity, when (1885) he conducted a party of Mexican editors and congressmen on a tour of observation throughout the United States. He had been planning to go to Mexico only a short time before his death, expecting to make an extensive tour to get material for a series of magazine articles.

E. H. Talbot

# Railway Construction

ATCHISON, TOPEKA & SANTA FE.—This company will soon call for bids for the construction of a one-story machine shop, 50 ft. by 200 ft., at Guthrie, Okla.

ATCHISON, TOPEKA & SANTA FE.—The report that this company is contemplating the construction of a branch line from Roswell, N. M., to Lubbock, Tex., which appeared in the *Railway Age* of May 26, is in error. No such project is under consideration.

CANADIAN NATIONAL.—This company will construct a reservoir of 400,000,000 gal. capacity by damming the valley of a small stream at Regina, Sask. The construction of pumps, pump house and a pipe line seven miles in length for delivery of the water to a tank at the Regina terminal, is also included in this project. At Kipling, Sask., and Avonlea, reservoirs of 50,000,000 gal. capacity will also be created by the construction of earthen dams across the valleys of intermittent streams.

CHESAPEAKE & OHIO.—This company has awarded a contract to Joseph E. Nelson & Sons, Chicago, for the construction of a 30,000 gal. capacity water treating plant at Peach Creek, W. Va.

CHICAGO & NORTH WESTERN.—This company has awarded a contract to the Howlett Construction Company, Moline, Ill., for the erection of a 250-ton frame coaling station at Belle Plaine, Iowa.

CHICAGO & NORTH WESTERN.—This company, jointly with the city of Milwaukee, Wis., will construct an ornamental bridge over Madison street in that city. The total cost of the bridge will be approximately $400,000, of which the North Western will furnish $100,000.

CHICAGO & NORTH WESTERN.—This company has awarded a contract to the Roberts & Schaefer Company, Chicago, for the construction of a 150-ton concrete coaling station at Stambaugh, Mich.

CHICAGO, BURLINGTON & QUINCY.—This company has awarded a contract to Morris & Daugherty, St. Paul, Minn., for the grading of the new line at Beardstown, Ill.

CHICAGO, NORTH SHORE & MILWAUKEE.—This company will construct a new passenger station at Highland Park, Ill. Plans for the work have been completed and bids are expected to be called for soon.

EDWARD HINES YELLOW PINE TRUSTEES.—The Interstate Commerce Commission has issued a certificate authorizing the construction of an extension from Kiln, Miss., to a connection with the Louisville & Nashville at Bay St. Louis, 9.97 miles.

FT. WORTH & DENVER CITY.—This company will construct temporary shops at Childress, Tex., to replace buildings recently destroyed by fire. The location and construction of permanent shops will not be considered at this time.

ILLINOIS CENTRAL.—This company is calling for bids for the construction of five interlocking towers at Gilman, Ill., Ashkum, Clifton, Chebanse and Otto. Each of these towers will cost approximately $8,000. Bids will be closed on June 9 for the construction of a second floor on the freight house at Decatur, Ill., to cost approximately $25,000. A contract has been awarded to Ellington Miller Company, Chicago, for the construction of two subways at Princeton, Ky., at an approximate cost of $60,000.

ILLINOIS CENTRAL.—This company has awarded a contract to Joseph E. Nelson & Sons, Chicago, for the construction of water treating plants at Dixon, Ill., and Panola; and to the Graver Corporation, Chicago, for the construction of water treating plants at Parkersburg, Iowa, Iowa Falls, Webster City and Marcus, as reported in the *Railway Age* of May 12.

LOUISVILLE & NASHVILLE.—This company plans the construction of a one-story machine shop at Etowah, Tenn., to cost approximately $30,000.

MICHIGAN CENTRAL.—This company has awarded a contract to Ellington Miller Company, Chicago, for the construction of an extension to its roundhouse at West Detroit, Mich., to cost approximately $80,000, as reported in the *Railway Age* of May 19.

PENNSYLVANIA.—This company is building a masonry dam in the Tipton Valley, 10 miles east of Altoona, Pa., to increase the water supply of its shops at that point. The dam will be 400 ft. long and 78 ft. high with a 60 ft. base in solid rock. A 32-acre lake with a capacity of 250,000,000 gal. will be formed back of the dam. The total cost of the work is estimated to be in excess of $500,000.

PENNSYLVANIA.—This company is beginning the construction of a second track from Toledo, Ohio, to Mansfield.

TRINITY & BRAZOS VALLEY.—This company is laying out a new town, about six miles from Corsicana, Tex., which will be called Mildred, Tex. A freight and passenger station and side tracks will be constructed.

WABASH.—This company will relocate its line at Randolph, Mo., at a cost of $76,000 and will construct viaducts at a total cost of $324,000 at Calhoun street, Fort Wayne, Ind., and Hastings street, Detroit, Mich. The company will also construct a plate girder bridge at O'Fallon, Mo., to cost $115,000; will enlarge a dock at Detroit, Mich., at a cost of $60,000 and will construct a reservoir at Stanberry, Mo., at a cost of $28,000.

## F. E. C. Construction Program

H. N. Rodenbaugh, general manager of the Florida East Coast, has issued the following statement relative to his company's construction program for the current year:

"The Florida East Coast Railway Company has this year embarked upon a program of development work, and extension greater than that of any other one year in the past ten. It feels assured of the rapid and steady growth of the territory which it serves, and the company is making instant and earnest efforts to place itself in a position to give assurance to all patrons that the facilities offered will be ample to easily care for these rapidly increasing requirements.

"Not only have the officials placed orders for a large quantity of passenger and freight cars but they have as well authorized the immediate construction of additional seventy-five car capacity passing tracks; the extension of many existing passing tracks; the enlargement of terminal facilities; the construction of new engine terminals at New Smyrna; the replacement of seventy-five track-miles of seventy-pound rails with ninety-pound rails and the equipment of these new rails with stronger and more efficient appliances in the way of rail joints, tie plates, frogs and switches.

"A new passenger station at Daytona will be ready for service before the end of the year and other points along the line will receive such attentions to the existing freight and passenger stations, as will be considered capable of meeting the requirements which the growth of the respective communities will demand.

"In addition to this very extensive program of improvement work, with its new rolling stock, tracks and buildings, there will be started this year the reconstruction of the bridge over the St. Johns river into Jacksonville. The present single track structure will be replaced with a double-track bridge of high capacity. The only thing the railroad company is waiting for before starting the work is the approval of the War Department, which has control over the navigable waters of the United States. This approval is hourly expected.

"Not only is the company greatly increasing the quantity of its locomotives and cars, but they have also arranged to purchase a quantity of heavy machine tools of various types and capacities, in order to appropriately maintain this large increase in the number of units.

"The company is also rushing to completion, in St. Augustine, its second unit of its general office building system, the first of which was put into use several months ago.

"About two months ago work was started on the extension from Okeechobee towards Miami of the Okeechobee-Miami extension of this railroad. It is proposed to carry the work as far south as Pahokee for the end of the present year."

# Railway Financial News

BARNEGAT.—*Authorized to Abandon Line.*—This company has been authorized by the Interstate Commerce Commission to abandon its line from Barnegat City Junction to Barnegat City, N. J., 8.12 miles.

BOSTON & MAINE.—*Decree Modified.*—See New York, New Haven & Hartford.

CANADA SOUTHERN.—*New Director.*—George F. Baker has been elected a director to succeed William Rockefeller, deceased.

CENTRAL NEW ENGLAND.—*Denies Intention to Abandon.*—President C. L. Bardo has denied that any proposals have been considered for the abandonment of this railroad, a subsidiary of the New York, New Haven & Hartford. He added that serious consideration is being given to the abandonment of certain unprofitable portions of the Hartford & Connecticut Western, which is leased by the Central New England.

CHICAGO & EASTERN ILLINOIS.—*New Director.*—Frank D. Stout has been elected a director to succeed M. A. Taylor.

CHICAGO, BURLINGTON & QUINCY.—*Six Months' Guaranty Certified.*—The Interstate Commerce Commission has issued a final certificate stating the amount of this company's guaranty for the six months' period following federal control at $12,288,463 and the amount due to make it good as $4,638,463.

CHICAGO, MILWAUKEE & ST. PAUL.—*Annual Report.*—This company's annual report for 1922 is reviewed in an article on another page of this issue entitled "Milwaukee Makes Large Expenditures for Equipment." See also excerpts from annual report on adjacent page.

COLORADO & SOUTHERN.—*Annual Report.*—The annual report for the year ended December 31, 1922, shows a net income of $1,737,276 as compared with $3,803,931 in 1921. A selection of the principal items in the income account follows:

| | 1922 | 1921 |
|---|---|---|
| Freight | $18,019,198 | $19,194,785 |
| Passenger | 4,576,876 | 5,481,756 |
| Total railway operating revenues | 24,328,762 | 26,281,289 |
| Maintenance of way and structures | 3,069,244 | 3,500,095 |
| Maintenance of equipment | 5,340,286 | 5,215,403 |
| Traffic | 294,149 | 283,361 |
| Transportation | 8,717,020 | 8,918,558 |
| General | 956,705 | 1,049,378 |
| Total railway operating revenues | 18,556,860 | 19,134,083 |
| Net revenue from railway operations | 5,771,902 | 7,147,205 |
| Railway tax accruals | 1,337,229 | 1,214,119 |
| Total operating income | 4,429,397 | 5,922,354 |
| Total non-operating income | 1,081,041 | 1,310,236 |
| Gross income | 5,510,438 | 7,232,590 |
| Total deductions from gross income | 3,773,161 | 3,428,660 |
| Net railway operating income* | 3,740,484 | 5,775,312 |
| Net income | 1,737,276 | 3,803,931 |
| Dividends | 680,552 | 680,573 |
| Income balance transferred to credit of profit and loss | 1,056,724 | 3,123,357 |

*Includes railway operating income and hire of equipment and joint facility rents.

DENVER & RIO GRANDE.—*Stockholders' Suit.*—Supreme Court Justice John Ford has sustained a demand for the examination before trial of Edward T. Jeffery, a defendant in the suit of the stockholders' protective committee of the Denver & Rio Grande against the estate of George J. Gould, Edwin Gould, Kingdon Gould, Finley J. Shepard and others, for an accounting. Mr. Jeffery asked that the application be vacated.

The attorneys in the case state that all of the facts concerning the alleged elimination of preferred and common stocks in the amount of $89,000,000 owned by the Denver & Rio Grande stockholders, will be disclosed during the examination.

EL PASO & SOUTHWESTERN.—*Annual Report.*—The annual report for the year ended December 31, 1922, shows a net income of $1,945,866 as compared with $1,327,236 in 1921. A selection of the principal items in the income account follows:

| | 1922 | 1921 | Increase or decrease |
|---|---|---|---|
| Railway operating revenues | $11,389,665 | $10,838,799 | $520,866 |
| Railway operating expenses | 7,727,063 | 8,439,019 | —711,956 |
| Net revenue from railway operations | 3,662,601 | 2,429,779 | 1,232,822 |
| Railway tax accruals | 980,192 | 1,084,251 | 104,059 |
| Railway operating income | 2,681,574 | 1,343,084 | 1,338,490 |
| Total operating income | 2,666,546 | 1,316,898 | 1,349,649 |
| Total non-operating income | 1,588,112 | 1,638,397 | —50,284 |
| Gross income | 4,254,659 | 2,955,295 | 1,299,364 |
| Total deductions from gross income | 2,308,793 | 1,628,059 | 680,734 |
| Net income | 1,945,866 | 1,327,236 | 618,631 |
| Dividend appropriations of net income | 1,500,000 | 1,327,236 | 172,764 |
| Balance to profit and loss | 445,866 | ..... | 445,866 |

ILLINOIS CENTRAL.—*Letter to Stockholders.*—President C. H. Markham in a letter addressed to the stockholders says:

> The treatment which the railroads have received at the hands of the legislative bodies is responsive to public sentiment. Measures inimical to the welfare of the railroads doubtless will be introduced in the Sixty-eighth Congress when it convenes a few months hence. An effort will be made to repeal or amend the Transportation Act of 1920. It is not perfect. I believe it should stand in its present form until such time as judgment of its matured and proper experience is had upon which to base any needful changes in it. Existing rates, higher than the pre-war level, are sometimes blamed on the Transportation Act. Unless there is a comparable reduction in cost of performing transportation service, rates cannot be reduced. I foresee no serious danger for the railroads, for I have faith in the soundness of public opinion and believe it will not go far astray when properly informed. Our duty is to make sure it is properly informed.

MORGANTOWN & WHEELING.—*Purchase Planned.*—The Scotts Run Railways Company has been incorporated with a capitalization of $1,000,000 to purchase the Morgantown & Wheeling when it is placed on sale by trustees of the Monongahela County Circuit Court July 6 to satisfy outstanding indebtedness of more than $1,000,000. The incorporators are: H. C. Nutt, Pittsburgh, president of the Monongahela Railway Company; Albert Ward, Pittsburgh, counsel for that company, and Judge Frank Cox, George C. Baker and Stanley R. Cox, of Morgantown, W. Va., local counsel for the company.

The Morgantown & Wheeling operates between Morgantown and Brave, W. Va., 27 miles.

MUSCLE SHOALS, BIRMINGHAM & PENSACOLA.—*Authorized to Issue Securities.*—This company has been authorized by the Interstate Commerce Commission to issue $2,500,000 of common stock and $1,500,000 of first mortgage 6 per cent gold bonds, $400,000 of the bonds to be used in purchasing the property formerly owned by the Gulf, Florida & Alabama, and $600,000 of the bonds to be sold at not less than 85 and the proceeds used for rehabilitation and reorganization. The remaining $500,000 of the bonds are to be held in the Treasury subject to further order of the commission.

NEW YORK, NEW HAVEN & HARTFORD.—*B. & M. Decree Modified.*—Federal Judge Julius M. Mayer on July 5 modified the decree of October 17, 1914, requiring the New York, New Haven & Hartford to dispose of its New England trolley holdings and its interest in the Boston & Maine. The modification restores to the New Haven its investment in the Boston & Maine, which now represents 28½ per cent of the voting rights of the latter company as distinguished from 52 per cent at the time of the decree, the New Haven, having changed from a majority to a minority stockholder by reason of the increase of the capitalization of the Boston & Maine incident to its reorganization during federal control.

The stock of the Boston & Maine is held by the Boston Railroad Holding Company and cannot be disposed of without certain obligations to the Commonwealth of Massachusetts. Judge Mayer's decree terminates the trust as far as Boston & Maine stock and the New Haven's holdings in lines leased to the Boston & Maine are concerned.

NORTHWESTERN PACIFIC.—*Asks Authority to Sell Bonds.*—This company has applied to the Interstate Commerce Commission for authority to sell $1,152,000 of 4½ per cent first and refunding mortgage bonds now held in the treasury.

PERE MARQUETTE.—*Dividends.*—An initial quarterly dividend of 1 per cent on the common stock, and the regular quarterly dividends of 1¼ per cent on the 5 per cent preference and 5 per cent preferred stock have been declared. The common dividend is payable July 2 to stock of record June 15 and the preferred dividends are both payable August 1 to stock of record July 14.

SAN ANTONIO & ARANSAS PASS.—*Annual Report.*—The results of operation during the year ended December 31, 1922, compare with the previous year, as follows:

| | 1922 | 1921 | Increase or decrease |
|---|---|---|---|
| Operating revenues | $5,780,170 | $6,322,114 | —$541,944 |
| Operating expenses | 5,263,282 | 6,046,068 | —782,786 |
| Net revenue from railway operations | 516,888 | 276,046 | 240,842 |
| Railway tax accruals | 180,167 | 167,279 | 12,888 |

| | | | |
|---|---|---|---|
| Total operating income | 333,068 | 105,135 | 227,933 |
| Gross income | 378,469 | 200,567 | 177,902 |
| Total deductions from gross income | 1,492,350 | 1,441,336 | 51,014 |
| Net loss | 1,113,881 | 1,240,769 | —126,888 |

SCOTTS RUN RAILWAYS COMPANY.—*Incorporation.*—See Morgantown & Wheeling.

SEABOARD AIR LINE.—*Annual Report.*—The annual report for the year ended December 31, 1922, shows a net loss of $1,158,230 as compared with a net loss of $224,206 in 1921. The comparative income account follows:

| | 1922 | 1921 | Increase or Decrease |
|---|---|---|---|
| Railway operating revenues | $45,679,048 | $42,844,933 | $2,834,115 |
| Railway operating expenses | 36,222,884 | 37,024,801 | —801,917 |
| Net revenue from railway operations | 9,456,164 | 5,820,132 | 3,636,032 |
| Railway tax accruals | 2,124,235 | 1,862,057 | 262,178 |
| Uncollectible railway revenues | 3,776 | 36,014 | —32,238 |
| Railway operating income | 7,328,153 | 3,922,061 | 3,406,092 |
| Equipments rents—Dr. | 2,991,975 | 1,735,730 | 1,256,245 |
| Joint facility rents—Dr. | 105,609 | 123,959 | —18,350 |
| Net railway operating income | 4,230,569 | 2,062,372 | 2,168,197 |
| Other income | 489,074 | 2,926,969* | —2,437,895 |
| Gross income | 4,719,643 | 4,989,340 | —269,697 |
| Rents and other charges | 105,973 | 81,410 | 24,563 |
| Applicable to interest | 4,613,670 | 4,907,930 | —294,260 |
| Fixed interest charges | 5,616,287 | 5,201,299† | 414,988 |
| Annual allotment of discount on securities | 155,613 | 139,171 | 16,442 |
| Other interest charges | ..... | Cr. 208,333§ | 208,333 |
| Net loss | 1,158,230 | 224,207 | 934,023 |

* Includes $1,473,279 accrued additional compensation applicable to period of Federal Control.
† Includes $339,779 reversal of interest accrued in previous year.
§ Reversal of November and December, 1920, accrual of interest on adjustment mortgage (income) bonds.

ST. LOUIS SOUTHWESTERN.—*New Director.*—Harry B. Wallace, president of the Cupples Company, has been elected a director.

TENNESSEE, ALABAMA & GEORGIA.—*Asks Authority to Issue Securities.*—This company has applied to the Interstate Commerce Commission for authority to issue $500,000 of common stock and $1,200,000 of first mortgage 50-year 6 per cent bonds to be sold at not less than 90, on the security of the road as built and an extension from Gadsden to Odenville, Ala., 36 miles. The former application for authority to issue $2,500,000 has been withdrawn and the proposal to finance partly by stock substituted.

TENNESSEE CENTRAL RAILWAY.—*First Annual Report.*—The first annual report for the 11 months ended December 31, 1922, states that the Tennessee Central Railway Company was incorporated January 26, 1922. The company purchased all the properties of the Tennessee Central Railroad and possession of same was given at midnight January 31, 1922.

The condensed income statement for the 11 months, February 1, 1922, to December 31, 1922, follows:

| | |
|---|---|
| Railway operating revenues | $2,333,534 |
| Railway operating expenses | 1,868,186 |
| Net revenue from railway operations | 465,348 |
| Railway tax accruals | 50,556 |
| Railway operating income | 414,789 |
| Gross income | 438,578 |
| Total deductions | 416,483 |
| Balance of income transferred to profit and loss | 22,095 |

ULSTER & DELAWARE.—*Annual Report.*—The annual report for the year ended December 31, 1922, shows a net loss of $112,570, as compared with a net corporate income of $5,727 in 1921.

VIRGINIAN.—*Equipment Trust Certificates Authorized.*—The Interstate Commerce Commission has authorized an issue of $5,700,000 of equipment trust certificates to be sold at not less than 94.587.

WESTERN MARYLAND.—*Asks Authority for Equipment Trust.*—This company has applied to the Interstate Commerce Commission for authority for an issue of $1,500,000 of 6 per cent, 10-year equipment trust certificates, to be sold to J. S. Wilson, Jr., & Co., of Baltimore, at 95.875.

WESTERN PACIFIC.—*Annual Report.*—The annual report for the year ended December 31, 1922, shows a net corporate income of $1,105,345, as compared with $2,808,533 in 1921. A selection of the principal items in the income account follows:

| | 1922 | 1921 | Increase or decrease |
|---|---|---|---|
| Freight revenue | $9,476,588 | $8,974,264 | $502,324 |
| Passenger revenue | 2,150,177 | 2,324,507 | —174,330 |
| Total operating revenues | 12,505,348 | 12,104,155 | 401,193 |
| Maintenance of way and structures | 1,970,510 | 2,157,574 | —187,064 |
| Maintenance of equipment | 2,219,372 | 2,338,689 | —119,117 |
| Traffic | 398,274 | 378,728 | 19,545 |
| Transportation | 4,558,399 | 4,561,023 | —2,624 |
| General | 453,752 | 716,855 | —263,104 |
| Total operating expenses | 9,837,151 | 10,391,343 | —554,192 |
| Net operating revenue | 2,668,198 | 1,712,812 | 955,386 |
| Railway tax accruals | 962,895 | *1,230,981 | —268,086 |
| Operating income | 1,704,461 | 481,024 | 1,223,437 |
| Operating and other income | 3,150,102 | 4,926,487 | —1,776,384 |
| Deductions | 2,044,757 | 2,067,953 | —23,196 |
| Net corporate income | 1,105,345 | 2,858,533 | —1,753,188 |
| Income applied to sinking fund | 50,000 | 50,000 | ..... |
| Dividend appropriation of income | 262,900 | ..... | 262,900 |
| Income balance | 792,445 | 2,808,533 | 2,016,088 |

*Includes $205,173 income taxes for years 1918 and 1919 paid in 1921 on account of compensation received as rental of property for 1918-1919 in excess of compensation on which taxes had been paid for the years in question.

## Treasury Payments to Railroads

Since last announcement, dated May 1, 1923, payments under Sections 204, 209, 210 and 212 of the Transportation Act, 1920, as amended, have been made by the Treasury as follows:

| | |
|---|---|
| Section 204: | |
| Dardanelle & Russellville Railroad Company | $8,508.01 |
| El Dorado & Wesson Railway Company | 14,220.86 |
| Gainesville & Northwestern Railroad Company | 76.27 |
| Garden City Western Railway Company | 5,834.11 |
| Hardwick & Woodbury Railroad Company | 425.02 |
| Johnstown & Stony Creek Railroad | 8,148.41 |
| Manufacturers' Junction Railway Company | 43,253.50 |
| Pittsburgh, Shawmut & Northern R. R. Co., Receiver | 189,560.52 |
| Sligo & Eastern Railroad Company | 38,774.76 |
| Stewartstown Railroad Company | 15,100.79 |
| Tampa & Jacksonville Railway Company | 12,637.96 |
| Traverse City, Leelanau & Manistique Railway Company | 3,564.64 |
| Zwolle & Eastern Railway Company | 25,629.39 |
| Section 209: | |
| Arizona Eastern Railroad Company | 73,499.24 |
| Atlantic Coast Line Railroad Company | 3,231,967.40 |
| Charleston & Western Carolina Railway Company | 219,878.78 |
| Columbus & Greenville R. R. Company | 387,231.02 |
| Duluth & Northeastern Railroad Company | 61,296.87 |
| Gainesville & Northwestern Railroad Company | 1,755.31 |
| Galveston, Harrisburg & San Antonio Railway Company | 350,148.14 |
| Gulf, Mobile & Northern Railroad Company | 50,259.68 |
| Houston East & West Texas Railway Company | 97,652.76 |
| Houston & Shreveport R. R. Company | 28,023.39 |
| Houston & Texas Central Railroad Company | 3,572.11 |
| Houston & Brazos Valley Railway Company, Receiver | 26,158.91 |
| Iberia & Vermilion Railroad Company | 12,430.47 |
| Lake Charles & Northern Railroad Company | 23,477.00 |
| Lake Erie & Eastern Railroad Company | 135,404.05 |
| Louisiana & Pacific Railway Company | 44,511.78 |
| Maine Central Railroad Company | 272,823.10 |
| Meridian & Memphis Railway Company | 15,553.49 |
| Montpelier & Wells River Railroad Company | 24,537.43 |
| Natchez & Southern Railway Company | 10,998.41 |
| Southern Pacific Company | 4,235,301.01 |
| Stewartstown Railroad Company | 2,163.06 |
| Sullivan County Railroad | 17,317.82 |
| Tennessee Central R. R. Company, Receiver | 65,499.46 |
| Texas & New Orleans Railroad Company | 165,714.97 |
| Vermont Valley Railroad Company | 11,959.49 |
| Section 210: | |
| New York, New Haven & Hartford R. R. Company | 2,000,000.00 |
| Seaboard Air Line Railway Company | 1,259,000.00 |
| Section 212: | |
| Tennessee Central Railroad Company, Receiver | 40,000.00 |
| Total | $13,233,869.39 |

## Dividends Declared

Atchison, Topeka & Santa Fe.—Preferred, $2.50, semi-annually, payable August 1 to holders of record June 29.

Beech Creek.—50 cents, quarterly, payable July 2 to holders of record June 15.

Chicago & North Western.—Common, 2½ per cent, semi-annually; preferred, 3½ per cent, semi-annually; both payable July 16 to holders of record June 15.

Chicago, St. Paul, Minneapolis & Omaha.—Common, 2½ per cent, semi-annually; preferred, 3½ per cent, semi-annually; both payable August 20 to holders of record August 1.

Louisiana & Northwest.—1¼ per cent, quarterly, payable July 2 to holders of record June 15.

New York & Harlem.—Common and preferred, $2.50, semi-annually, payable July 2 to holders of record June 15.

Pittsburgh, Ft. Wayne & Chicago.—Common, $1.75, quarterly, payable July 2 to holders of record June 11; preferred, $1.75, quarterly, payable July 3 to holders of record June 11.

Pittsburgh, McKeesport & Youghiogheny.—$1.50, semi-annually, payable July 2 to holders of record June 15.

Rensselaer & Saratoga.—$4.00, semi-annually, payable July 2 to holders of record June 15.

Rochester & Syracuse.—Preferred, 1 per cent, quarterly, payable June 15 to holders of record June 1.

Western Pacific.—Preferred, $1.50, quarterly, payable July 2 to holders of record June 20.

## Trend of Railway Stock and Bond Prices

| | June 5 | Last Week | Last Year |
|---|---|---|---|
| Average price of 20 representative railway stocks | 64.11 | 64.99 | 65.01 |
| Average price of 20 representative railway bonds | 83.63 | 83.78 | 86.06 |

# Annual Report

## Fifty-Eighth Annual Report of the Chicago, Milwaukee & St. Paul Ry. Co.

The Directors submit to the Stockholders the following report of the operations of the Company for the year ended December 31, 1922.

### INCOME ACCOUNT

| | | |
|---|---|---|
| RAILWAY OPERATING INCOME: | | |
| Railway operating revenues | $156,950,628.06 | |
| Railway operating expenses | 129,596,696.49 | |
| Net railway operating revenue | $27,353,931.57 | |
| Railway tax accruals | 9,654,737.74 | |
| Uncollectible railway revenues | 6,533.83 | |
| Railway operating income | | $17,692,660.00 |
| Equipment rents | $2,977,205.43 | |
| Joint facility rents | 1,431,210.00 | 4,408,415.43 |
| Net railway operating income | | $13,284,244.57 |
| NON-OPERATING INCOME: | | |
| Rents received—Other | $635,370.80 | |
| Income from lease of road | 335,361.70 | |
| Dividends on stocks | 29,967.00 | |
| Interest on bonds | 35,286.17 | |
| Interest on other securities and accounts | 216,579.47 | |
| Miscellaneous income | 322,035.10 | 1,574,700.24 |
| Net railway and non-operating income | | $14,858,944.81 |
| DEDUCTIONS: | | |
| Interest on funded debt | $18,926,851.33 | |
| Interest on unfunded debt | 295,575.54 | |
| Rents paid—Lease of road | 919,422.95 | |
| Rents paid—Other | 60,265.09 | |
| Miscellaneous | 799,997.93 | 21,002,112.84 |
| DEFICIT | | $6,143,168.03 |

### GENERAL STATEMENT

The result of operations of your Company for the year ended December 31, 1922, shows a deficit of $6,143,168.03 as compared with a deficit of $11,079,608.66 for the year ended December 31, 1921.

While this result is by no means satisfactory it does reflect a substantial improvement over the operations of the previous year, especially when consideration is given to the unusual conditions that prevailed during the year 1922 which seriously affected the earnings of the Company, viz.:

1. The coal miners' strike, taking effect April 1 and continuing until September, 1922, which entirely suspended the operation of coal mines on your lines and not only deprived your Company of the normal earnings on coal transported for commercial use, but greatly increased the cost of coal used in locomotives, the increased cost of locomotive fuel due to the strike amounting to approximately $2,195,000.

2. The railroad shopmen's strike which took effect July 1, 1922, and was settled on this road in September, 1922. In addition to the serious interruption to traffic because of this strike, and the suspension of repair work on locomotives and cars, there was an extra expense of approximately $2,225,000 directly attributable to the strike.

3. The reductions in freight rates taking effect in January and July, 1922, reduced the earnings for the balance of the year approximately $12,000,000. This was partly offset by a decrease of approximately $3,705,000 in the wages of employees, taking effect July 1, 1922, and which was the cause of the shopmen's strike.

Reference to page 36 of the report shows that the improvement in earnings began about July 1 and for the six months, July 1 to December 31 were more than sufficient to cover the fixed charges for the same period.

One of the greatest needs of our Company is a more adequate supply of freight cars and locomotives with which to handle the growing traffic, especially during the fall and winter months, and which has a restrictive effect on the revenues of the Company. With a view to overcoming this deficiency as much as possible, the following new equipment was purchased under equipment trust during the year:

| | |
|---|---|
| 2,580 | 50-ton Steel Frame Coal Cars. |
| 3,500 | 40-ton Steel Frame Box Cars. |
| 500 | 40-ton Steel Frame Automobile Cars. |
| 25 | Mikado Type Freight Locomotives. |

By contracting for this equipment before the rise in market price a saving of approximately $3,500,000 was made as compared with present prices for equipment.

During the year a total of 8,381 freight cars were renewed and strengthened into serviceable condition, to meet the modern requirements of heavier loading and trains, at a cost of approximately $5,000,000 in addition to the ordinary repairs to freight equipment.

With reference to the shopmen's strike: I desire to express the appreciation of the management for the loyal and efficient service rendered by officers and employees, and volunteers who remained at work during the shopmen's strike. This small group of employees, amounting in all to approximately 1,400 men, by working long hours and under great difficulties were able to maintain practically uninterrupted service on the railroad, notwithstanding the fact that approximately 16,400 men left the service on July 1, 1922.

### ADDITIONS AND BETTERMENTS

EQUIPMENT:

Purchase was authorized of 25 Mikado locomotives from the Baldwin Locomotive Works, all of which were received. Authority was granted for the purchase of 3,500 40-ton steel frame box cars and 500 40-ton steel frame automobile cars, of which number 2,927 box cars and 253 automobile cars were received. The conversion of 10 class A-1 compound locomotives to simple type, 4 of which were authorized in the previous year, was completed and in addition to these, 23 steam locomotives were rebuilt. Authority was given for the conversion of 2 Class A-4 and 2 Class B-2 compound locomotives to simple type, none of these units being completed in 1922.

TRACK:

The principal items of track work during the year include one mile of main line logging railroad and two interchange tracks built at Star Lake, Wis., to serve the Stange Lumber Co.; one mile of logging spur constructed on the New Wood River Line in Wisconsin to serve the Kinzel Lumber Co. and two interchange tracks, in the total length of 5,847 feet built at Clarkia, Idaho, to serve the logging operations of the Rutledge Timber Co.

BRIDGES AND HIGHWAY CROSSINGS:

Timber overhead highway bridge T-196½, 141 feet in length was constructed at Morningside, Iowa. The 4,296 foot bridge FF-962 over Skykomish River at Monroe, Washington, and the 2,883 foot bridge EE-44 over Benewha Lake, Idaho, were rebuilt. Benewha Lake is a navigable body, necessitating the placing of a 50 foot girder span. The reconstruction of the 344 foot pile trestle FF-702 at Bagley Junction, Washington, was completed, as was also the reconstruction of the Randolph St. Viaduct, Chicago, Illinois, by forces of the Chicago Union Station Co., ownership of which is participated in by this company.

WATER SUPPLY:

A new locomotive water supply station was completed in December at Marathon, Iowa, consisting of new tank and pipe line and second hand pump house moved from Gillett Grove. The well was driven in 1920. The water station at Gillett Grove has been unsatisfactory and will be abandoned. The water treating plant at Chamberlain, So. Dak., was completed. A replacement well was driven at Calmar, Iowa, and the new well completed at Sanborn, Iowa. The water supply station at Lennox, So. Dak., mentioned in the 1921 report, was also completed.

STOCK PENS:

One block of 28 pens were rebuilt at Milwaukee, Wis., to facilitate the handling of additional business. A new stock yard 68 ft. x 200 ft. was erected at Waukon, Iowa, in accordance with an order from the State Railroad Commission and based on a plan agreed upon with shippers and business men of Waukon.

GRADE SEPARATION:

The elevation of the tracks on the Evanston Line of the Chicago Terminals Division between Montrose Blvd. and Howard Street, Chicago, a distance of 4.4 miles, was practically completed during the year. The bridge floors were completed during the year and the fourth main track laid and put into service. New stations were constructed at Argyle Street, Berwyn, Bryn Mawr, Thorndale, Granville and Jarvis Avenues. Of these the station at Bryn Mawr has been turned over to traffic, and the others will be in service early in the coming year. A new station at Lawrence Avenue, not contemplated in the original program, was ordered by the Illinois Public Utilities Commission. Its erection was practically completed during the year and it will be placed in service early in 1923.

### CHICAGO, TERRE HAUTE & SOUTHEASTERN RAILWAY

EQUIPMENT:

Forty-five new 50-ton steel frame gondola cars, purchased and received from the Bettendorf Co. were assigned by the Chicago, Terre Haute & Southeastern Railway Co. to the Girard Trust Co. as Trustee, as replacements of vacancies occurring prior to July 1, 1921. These cars were paid for by the Chicago, Terre Haute & Southeastern Ry. Co.

The following addition and betterment work on Chicago, Terre Haute & Southeastern Railway was done by the Chicago, Milwaukee & St. Paul Ry. Co., for which it is reimbursed under the least agreement in Chicago, Terre Haute & Southeastern Ry. Co. bonds.

EQUIPMENT:

One locomotive and one gondola car were accounted for as rebuilt; 1,000 gondola cars were equipped with steel "H" beam center sills and end sill channels. Work is under way on the rebuilding of 1,250 gondola cars, authorized during the year, 750 of which are to be completed by the Keith Railway Equipment Co. and the remaining 500 by our own forces.

TRACK:

Authority was granted for the construction of seven additional yard tracks, approximately 35,000 feet in length, at West Clinton, Indiana, about 90% being completed at the close of the year. A 1,408 foot extension to passing track and a 3,447 foot storage track were constructed at Stoddart, Indiana.

Mine track systems were constructed as follows:

9,600 ft., Linton Summit Mine at Hoosier, Ind., 90% completed.
4,757 ft., Templeton Coal Co. at Hymera, Ind., completed.
18,431 ft., Ben Ayr Coal Co. at Coalmont, Ind., completed.
6,754 ft., Sullivan Coal Co. at Sullivan, Ind., completed.

SHOP FACILITIES:

New frame machine shop and power house at West Clinton, Indiana, together with necessary machinery to equip them for operation were authorized and were approximately 90% completed at the close of the year.

GRAVEL PIT AND BALLASTING:

Approximately 30,000 cubic yards of stripping were removed from the gravel pit at Stoddart, Indiana, which was reopened for use during the year; 18,360 cubic yards of gravel ballast was placed on 15 miles of line between the Illinois, Indiana State Line and Belt Junction, Indiana.

TELEGRAPH AND TELEPHONE:

Additional telephone and telegraph facilities were installed between Faithorn, Illinois, and West Clinton, Indiana, involving the stringing of 111.3 miles of wire, of which 79.8 miles were completed during the year and the remainder completed in January, 1923.

### GUARANTY PERIOD

As stated in report of last year, the Company filed with the Interstate Commerce Commission a statement of its operations during the guaranty period under the provisions of the Transportation Act, 1920. In addition to the amount of $14,297,702.00 reported received in 1920 report, further advances were made during the year 1921, amounting to $8,137,190.03, and $676,636.00 was received during the current year 1922 in settlement of claim before the Interstate Commerce Commission for the balance of the amount due under the guaranty, mentioned in report for last year.

### FEDERAL VALUATION

The Interstate Commerce Commission has practically finished its detailed work in connection with the Federal Valuation of this Company's property. Preliminary Engineering Report giving estimated cost of reproduction new and less depreciation was completed in December and served on this Company shortly thereafter. The Land Report will probably be received during 1923. Co-operative work by this Company and the Bureau of Valuation on the final collection and adjustment of quantities was completed in December and further work of the Valuation Department will consist of the derivation and application of reproduction costs for comparison with the Commission's figures and the compilation and filing with the Commission of objections and criticisms.

By order of the Board of Directors.
April, 1923.

H. E. BYRAM, President.

[ADVERTISEMENT]

# Railway Officers

## Executive

**H. L. Money** has been appointed assistant to the vice-president of the Louisiana Railway & Navigation Company of Texas. Mr. Money's headquarters are at Greenville, Texas.

**R. R. Farmer,** whose appointment as vice-president of the Louisiana Railway & Navigation Company of Texas, with headquarters at Greenville, Tex., was reported in the *Railway Age* of May 5, was born on November 28, 1880, at Fulton, Mo. He entered railway service on July 4, 1897, as messenger and office boy on the Missouri, Kansas & Texas Railway of Texas, at Denison, Tex. He was promoted to yard clerk in 1897 and was later appointed bill clerk and ticket clerk. He was promoted to freight brakeman on the Choctaw division in July, 1898, and two years later was promoted to freight conductor. Mr. Farmer was subsequently promoted to yardmaster and served in this capacity until September, 1910, when he was promoted to assistant superintendent of the McAlester division. In July, 1913, he was promoted to trainmaster on the Parsons division, with headquarters at Sedalia, Mo. He was transferred to the Dallas division in March, 1916, and in September of the same year was transferred to the Osage division. He was transferred to the St. Louis district in September, 1918, and in March, 1919, was transferred to the Choctaw division. Mr. Farmer was transferred to the Denison-Ray terminal in September, 1919, and served in this capacity until March, 1920, when he was promoted to superintendent of the Shreveport division, with headquarters at Greenville, Tex. He was serving in this capacity at the time of his recent appointment as vice-president of the Louisiana Railway & Navigation Company of Texas.

R. R. Farmer

**A. M. Burt,** assistant to the vice-president of the Northern Pacific with headquarters at St. Paul, Minn., has been promoted to assistant vice-president with the same headquarters. **B. O. Johnson** has been appointed assistant to the vice-president with headquarters at St. Paul, Minn., succeeding Mr. Burt.

**P. R. Albright,** general manager of the Atlantic Coast Line with headquarters at Wilmington, N. C., has been elected vice-president and general manager with the same headquarters. **T. F. Darden,** assistant to executive vice-president and assistant secretary, with headquarters at Wilmington, has been elected vice-president in charge of accounts and freight claims with the same headquarters.

**Sir Henry W. Thornton,** president of the Canadian National, has been elected president of the Ontario Car Ferry Company and **W. T. Noonan,** president of the Buffalo, Rochester & Pittsburgh, has been elected vice-president. The company is jointly owned by the Canadian National and the Buffalo, Rochester & Pittsburgh and operates car ferries between Rochester, N. Y., and Cobourg, Ont.

## Operating

**B. A. Porter** has been appointed inspector of transportation of the Missouri Pacific with headquarters at St. Louis, Mo.

**E. J. Cleave** has been appointed district manager of the car service division of the American Railway Association with headquarters at New York.

**R. J. Blair** has been appointed superintendent and car accountant of the Louisiana Railway & Navigation Company of Texas, with headquarters at Greenville, Tex.

**M. M. Sisson** has been appointed assistant general manager of the First district of the St. Louis-San Francisco, with headquarters at Springfield, Mo. The First district consists of the Eastern, Southern and River divisions and the St. Louis, Springfield and Birmingham terminals. **J. H. Fraser,** assistant general manager, with headquarters at Springfield, Mo., has been appointed assistant general manager of the Second district, with the same headquarters. The Second district consists of the Northern, Southwestern, Central and Western divisions and the Kansas City and Tulsa terminals.

**H. E. Baily,** whose appointment as superintendent of the New York, New Haven & Hartford with headquarters at New York was announced in the *Railway Age* of May 19, 1923, page 1250, secured his first railroad experience on the Philadelphia & Reading as an operator and clerk. After having been in the employ of that company for about three years, he entered the servic of the New York, New Haven & Hartford, in November, 1890, as a signalman. In 1892 he was transferred to the train dispatcher's office of the New York division and served successively as train dispatcher, chief clerk to the superintendent, chief dispatcher, trainmaster and acting superintendent, which position he was holding at the time of his recent promotion.

**O. T. Waring,** whose appointment as superintendent of the Atlantic Coast Line with headquarters at Charleston, S. C., was announced in the *Railway Age* of April 7, page 933, was graduated in civil engineering at University of Pennsylvania in 1902. In July of the same year he began railway work in the engineering department of the Baltimore & Ohio. He was promoted to assistant division engineer the following July, and in July, 1905, went to the Atlantic Coast Line as assistant engineer. He entered the service of the Charleston & Western Carolina in May, 1906, in the same capacity. He was promoted to assistant superintendent of that road in November, 1907, and the following year returned to the Atlantic Coast Line as roadmaster at Wilmington, N. C. From September, 1909, until October, 1910, he was acting engineer of roadway of the Second division of the Atlantic Coast Line and was then appointed assistant engineer in chief engineer's office at Wilmington, N. C. He remained in that position until January, 1911, when he was appointed superintendent of the new Winston-Salem district of the Atlantic Coast Line. On January 1, 1923, he was appointed engineer of roadway, Second division, with headquarters at Savannah, Ga., and on February 1, 1914, he was appointed superintendent of the Waycross district, headquarters Waycross, Ga. On April 1, 1923, he was promoted to superintendent of the Charleston district, the position he now holds.

O. T. Waring

**Charles H. Sauls,** whose appointment as superintendent of the Seaboard Air Line with headquarters at Raleigh, N. C.,

was announced in the *Railway Age* of May 5, 1923, page 1137, was born on March 21, 1893, in Wake County, N. C. He entered railway service in 1906 as a telegrapher on the Seaboard Air Line at Raleigh, N. C., and remained at that point in the same capacity until 1910 when he went to the St. Louis-San Francisco in the same capacity. He later served as a telegrapher for the Chicago, Burlington & Quincy, the Southern and the Union Pacific and returned to the Seaboard Air Line in 1915. Since that date, he has been successively operator, train dispatcher, chief dispatcher and train master which latter capacity he was serving at the time of his recent promotion.

### Traffic

**T. W. Scott** has been appointed traveling freight agent of the Missouri-Kansas-Texas with headquarters at New York.

**W. B. Cook** has been appointed agricultural agent for the International-Great Northern, with headquarters at Houston, Tex.

**R. W. Smock** has been appointed general freight and passenger agent of the Union Pacific with headquarters at Long-beach, Cal.

### Engineering, Maintenance of Way and Signaling

**C. R. Harding,** assistant consulting engineer of the Southern Pacific with headquarters at New York, has been appointed consulting engineer with the same headquarters, succeeding **J. D. Isaacs,** retired.

**Burt T. Anderson,** assistant signal engineer of the Delaware, Lackawanna & Western, has resigned to become superintendent of signals of the Chesapeake & Ohio; his appointment as such taking effect on June 1; headquarters at Richmond, Va. He has entire charge of the signal department. Mr. Anderson has been engaged in signal work for 16 years and in the railroad service, 13 years. Graduating from the University of Illinois in 1907, he went to work for the Union Switch & Signal Company and took part in the installation of signals on the Lake Shore & Michigan Southern, the Hudson & Manhattan and the Pennsylvania. On June 1, 1910, he took a position as draftsman on the Atchison, Topeka & Santa Fe and soon after was appointed construction foreman. In March, 1913, he was appointed assistant signal engineer of that system. In June, 1914, he left the Santa Fe to become assistant signal engineer of the Lackawanna at Hoboken, N. J. Mr. Anderson is president of the Signal Section of the American Railway Association to which position he was elected last March. He has been prominent in the work of this Section, and its predecessor, the Railway Signal Association, for many years, serving on important committees.

**B. T. Anderson**

**W. C. Borchert,** district engineer of the Missouri, Kansas & Texas, with headquarters at Greenville, Tex., has been appointed chief engineer of the Louisiana Railway & Navigation Company of Texas, with the same headquarters.

**E. K. Mentzer** has been appointed principal assistant engineer of the Boston & Albany with headquarters at Boston, succeeding **G. W. Abbott** who has resigned to take up private practice. **W. A. Bump** has been appointed division engineer of the Albany division with headquarters at Springfield, Mass., succeeding **Mr. Mentzer.**

**Wendell P. Ball,** whose appointment as engineer of maintenance of the Pittsburgh & West Virginia and the West Side Belt, was reported in the *Railway Age* of May 12, page 1190, was born on September 28, 1888, and was graduated in civil engineering from Allegheny College, Meadville, Pa. He then spent two years in signal construction work on the Northern Pacific, the Cumberland Valley and another railroad. In 1912 he entered the service of the Baltimore & Ohio and spent eleven years in the engineering, valuation, construction, cost and maintenance departments, being employed as investigating engineer for that company with headquarters at Baltimore, Md., at the time of his recent appointment.

### Mechanical

**I. E. Sanders** has been appointed master mechanic of the Louisiana Railway & Navigation Company of Texas, with headquarters at Greenville, Tex.

**M. J. McGraw** has been appointed master mechanic of the Seaboard Air Line with headquarters at Jacksonville, Fla., succeeding **H. Y. Harris,** assigned to other duties.

**O. S. Jackson,** assistant superintendent of motive power and machinery of the Union Pacific with headquarters at Omaha, Neb., has been promoted to superintendent of motive power and machinery with the same headquarters, succeeding C. E. Fuller, who has resigned.

### Special

**H. C. Fondren** has been appointed agricultural and colonization agent of the Southern Pacific, Louisiana Lines, with headquarters at Lake Charles, La.

**J. L. Cobbs, Jr.,** whose appointment as director of public relations of the Atlantic Coast Line with headquarters at Wilmington, N. C., was noted in the *Railway Age* of May 5, 1923, page 1138, was born on February 10, 1887, at Montgomery, Ala. He was graduated from the University of the South, Sewanee, Tenn., in 1907 with a degree of bachelor of arts. Two years later he received a degree of master of science in forestry from the University of Michigan. Mr. Cobbs' early education was in preparation for newspaper work but he became interested in forestry and was employed by the United States Forest Service and by a private lumber company until 1916 in estimating and appraising timber and in reconnaissance work in Montana, Idaho, the Dakotas, Alabama and the southern Appalachians. In 1916 he was placed in charge of publicity of the Forest Service and in 1920 was appointed chief of the division of publications of the United States Department of Agriculture. In this capacity he had charge of all publications, motion pictures, exhibitions and press service of the department. He became interested in the effect of freight rates and adequate railroad service upon the agricultural prosperity of the country and gave the matter considerable study which led to his appointment with the Atlantic Coast Line.

## Obituary

**A. L. Craig,** general passenger agent of the Union Pacific with headquarters at Omaha, Neb., died in that city on June 5.

**George W. Porter,** assistant treasurer and a former paymaster of the New York Central, died in New York, on June 6. Mr. Porter had been connected with the New York Central and its predecessor, the New York Central & Hudson River, and prior to that with the West Shore, for 40 years.

**Walter B. Gormley,** for 18 years trainmaster on the Schuylkill Division of the Pennsylvania Railroad, died at his home in Norristown, Pa., on May 24, having been stricken with apoplexy in Philadelphia on the preceding Sunday. Mr. Gormley was born at Lancaster, Pa., on February 2, 1858, and entered the service of the Pennsylvania as telegrapher in February, 1873. He was appointed train dispatcher in 1884 and trainmaster on July 25, 1892. Since June 1, 1920, he had been on the staff of the general superintendent of transportation of the eastern region, serving on the dispatching committee and performing other special duties. He is survived by a wife, two sons and a daughter.